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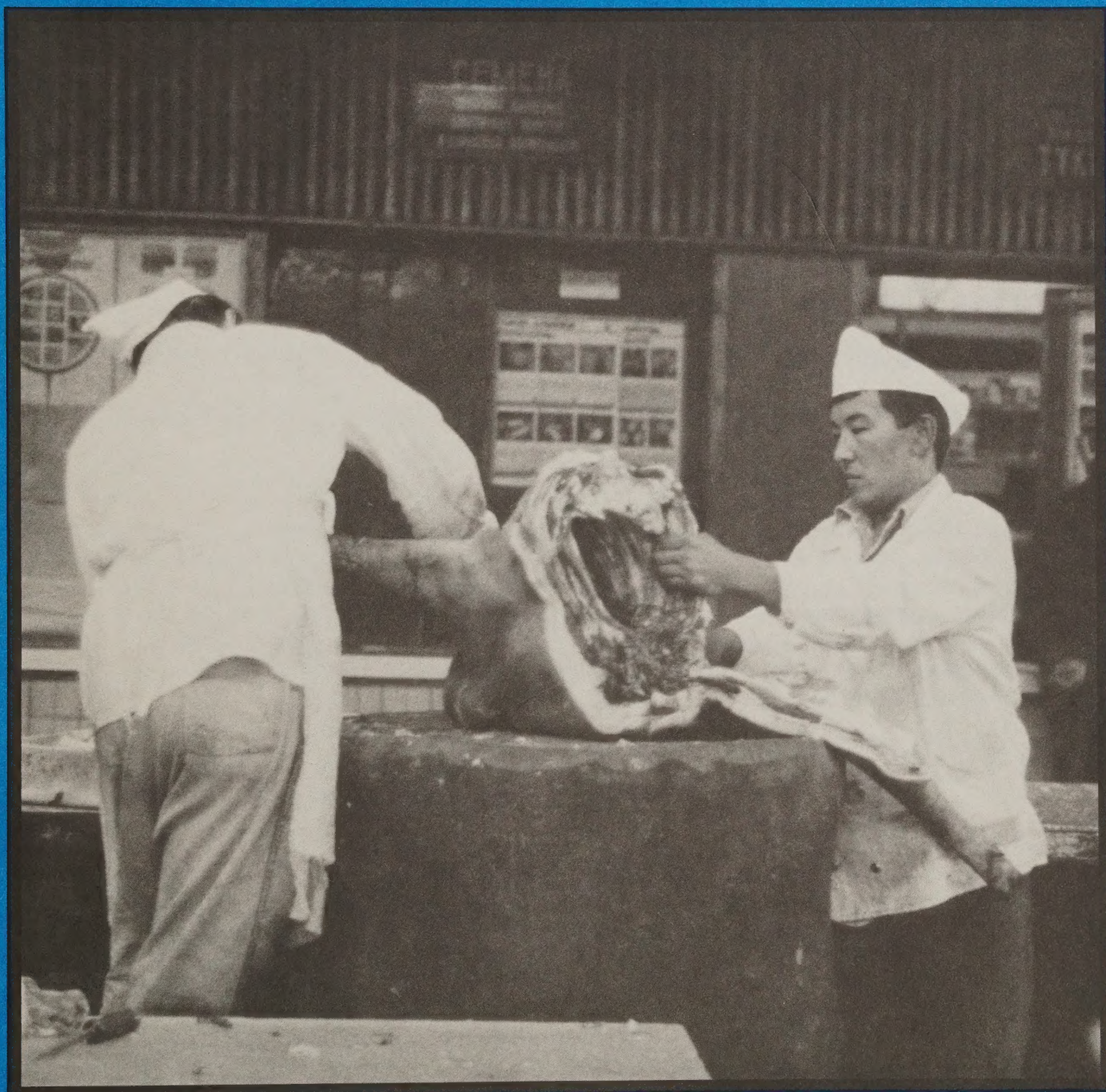
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Reform-based changes have made NIS/B region a major meat importer whose purchases will remain robust over long term.

Status of Agricultural Reforms in the NIS/B Countries in 1997

Six years after the breakup of the Soviet Union, land reform has progressed furthest in the Baltic countries, Armenia and Georgia. However, the main change in NIS/B agriculture—the decline of the livestock sector—is due to changes in relative prices and income, not to land reform. Land reform and farm restructuring in Armenia, Georgia, and the Baltic countries have improved the financial performance of agriculture there, because private farms generally have performed better financially than former state and collective farms. But the lack of land reform has limited the productive use of resources in the other NIS/B countries. [David J. Sedik]

Six years after the breakup of the Soviet Union, a definite pattern can be discerned in the extent of agricultural reform in the NIS/B states. The economies in which general and agricultural reform have advanced furthest are those of the **Baltic** countries and two **Caucasus** countries, **Armenia** and **Georgia**. Reform has lagged the most in two **Central Asian** nations, **Uzbekistan**, and **Turkmenistan**, as well as in **Belarus**. Agriculture in countries such as **Russia**, **Ukraine** and **Moldova** stands between these two extremes, incompletely reformed.

Reform of the agricultural sector has led primarily to a *restructuring of production and consumption* away from livestock in each NIS/B country. Macroeconomic policy changes, such as price liberalization and the elimination of many agricultural subsidies, have eliminated the implicit subsidies to livestock production and consumption that existed in the Soviet era due to fixed consumer and producer prices. Producers and consumers now base decisions more on actual costs of production and demand, and, accordingly, produce and consume less livestock products. Liberalization of both foreign trade and internal markets has led to considerable price competition from imported food. The fall in consumer income of the past 5 years has also contributed to a decline in meat demand. Economic restructuring has been deepest in the countries where these reform policies have gone furthest.

The largest disappointment in NIS/B agriculture is the continued *lack of an institutional environment that encourages the productive use of resources*. We refer to this as the lack of land reform, though this is a shorthand for a much broader problem. In particular, land markets perform three important functions, which make them the foundation of yield performance, as well as of well-functioning markets for capital and management.

First, without land markets, land appears as a (nearly) free good for managers of former state/collective farms. Thus, by Western standards, land is grossly *overused* in farming in the countries of the NIS/B region. This results in sowing crops on a lot of rather low-yielding land, since the cost of sowing on an extra hectare of land is quite low. The near zero cost of land also makes for exceptionally large farms, compared to those in the United States.

Second, land is the primary asset of a farm, and thus functions as collateral for loans used to fund capital investment. If land is essentially an inalienable asset, farms can use only their future crop as collateral for loans. Though farms often finance working capital for spring plowing by pledging to deliver part of their crop to the state in the fall, the value of crops is too small and uncertain to generate capital investment. The result is low farm capital investment.

Third, since land is the primary asset of a farm, the possibility of losing that asset should act as an incentive for management to avoid insolvency. Once again, if that asset is inalienable, management may find it more attractive either to enrich itself through rent seeking, or maintain worker employment while neglecting claims of creditors, actions inconsistent with long-run profit maximization. The end result is poor managerial performance, viewed from the point of view of the productive use of resources, and the lack of a hard budget constraint.

This is not to say that improvements in agriculture cannot come without land privatization. For instance, construction of better commercial infrastructure, storage facilities, better roads, and market information systems, as well as improvements in downstream food industries, could improve agricultural performance. However, the lack of functioning land markets in the NIS/B countries, except for **Armenia** and **Georgia**, limits the ability to improve the productivity of resource use, because land is unable to perform the functions mentioned above. For this reason crop yields are lower than they could be, investment is low, and management does not face the market pressures that it would if unpaid creditors could seize farm assets.

Because farming on former state and collective farms is unproductive and unprofitable, *private agriculture* in the NIS/B countries has increased its share of total agricultural output in the past few years. According to official statistics, private plots and private farms constitute virtually the only financially viable part of farming. We expect this trend to continue, because of the limitations on productivity that lack of land markets engenders.

Armenia and Georgia: Macroeconomic Reforms And Privatized Agriculture

Armenia and **Georgia** stand out as the countries with the most reformed agriculture in this study. These are the only countries that have introduced both macroeconomic reforms (price deregulation and liberalization of domestic and foreign trade) and have effectively privatized agriculture. The combination of price liberalization and privatization of agriculture is responsible for the best record of growth in NIS/B agriculture. **Armenian** agricultural production has grown for 4 consecutive years, while **Georgia's** agricultural production has risen for 2 years. The livestock sectors in Armenia and Georgia turned around in 1994 and 1995, and have been expanding since. This growth is remarkable given the continued decline of the sector in most of the other NIS/B countries, and suggests that, despite great difficulties (such as absence of financing and poor land quality), private farms can be financially viable, even when former state and collective farms perform poorly.

In **Armenia**, agricultural and consumer prices were deregulated in 1992. State commodity procurement was ended in 1995. Subsidies to agriculture, except for irrigation, have been substantially discontinued. In **Georgia**, state orders were eliminated in 1995, and agricultural prices are market-determined, though some retail price controls exist for bread and milk.

External trade liberalization of agricultural markets has lagged behind liberalization of domestic markets. In **Armenia**, the export of grain and grain products is prohibited, and there are minimum export prices. Moreover, imports of food products from outside the NIS region cannot exceed 50 percent of total consumption. In **Georgia**, the export of meat, meat products, dairy products, grain and grain products, sugar, and mixed feed is prohibited. There is a 12-percent uniform duty on extra-NIS imports.

The two Caucasus countries have seen the most thorough, rapid, and comprehensive land privatizations in the NIS/B area. **Armenian** agriculture was decollectivized in 1991, and now all but 20 percent of arable land has been distributed to private farms. In **Georgia**, private farms hold only 49 percent of cultivated land. However, the rest of land held by collective and state farms lies virtually unused, because those farms have essentially ceased production. The typical farm size in **Armenia** and **Georgia** is about 1.5 and 0.75 hectares, respectively. These are essentially enlarged private plots. They are predominantly mixed farms, producing corn, vegetables, fruits, and grapes, as well as milk, meat, and eggs.

Crop yields on private farms in **Armenia** and **Georgia** have been, on the whole, comparable to historical yields on former state and collective farms (table 1). Livestock productivity indicators on private plots have always been better than those on state and collective farms, and, despite their small size, farms in **Armenia** and **Georgia** are not aimed at self-sufficiency. These farms tend to market 30 to 40 percent of their main products, mostly directly to consumers.

Table 1 --Mean crop yields in private sector, Armenia and Georgia

	Sample mean ¹	Country mean ¹
Centners/hectare		
Armenia		
Wheat	23.0	22.0
Barley	13.0	19.0
Corn	42.0	na
Potatoes	125.0	123.0
Vegetables	137.0	230.0
Fruits	64.0	46.0
Grapes	67.0	69.0
Hay	60.0	35.0
Georgia		
Wheat	22.0	18.0
Barley	19.0	21.0
Corn	33.0	25.0
Beans	14.0	9.0
Sunflower	28.0	6.0
Potatoes	81.0	112.0
Vegetables	68.0	133.0
Melons	59.0	na
Fruits	70.0	73.0
Grapes	59.0	59.0
Feed crops/hay	31.0	na

¹ The sample mean is the result of surveys of private farms carried out by the governments of Armenia and Georgia and the World Bank in April-June 1996.

The country mean is official (all farm)

statistics. For Armenia, 1985-93, for Georgia, 1985-94.

Note: centner equals 100 kilograms.

Source: World Bank.

Baltic Countries: Macroeconomic Reforms, Slower Land Reform

The Baltic countries have liberalized prices, eliminated consumer subsidies, and liberalized domestic and foreign trade. These changes have caused the restructuring of agricultural production. However, land reform in the Baltic countries has proceeded more slowly than in **Armenia** and **Georgia**. Thus, agricultural production continues to shrink in these countries (except **Lithuania**, where there are support prices for agricultural products).

Prices in **Estonian** agricultural markets are freely determined. There are no government price supports or government procurement. In **Latvia**, agricultural prices are freely determined and there is no government procurement. However, there exist minimum guaranteed prices (close to market prices) for a small quantity of grain for government purchase for state reserves. Liberalization of agricultural markets in **Lithuania** is least complete of the Baltic countries. The Lithuanian government has introduced a system of minimum prices for a number of livestock products and crops. The government purchases meat and butter to maintain these prices. In addition, there are direct subsidies for a specified quantity of agricultural commodities.

Estonia currently has the most liberal trade policies in the NIS/B region with neither non-tariff nor tariff barriers on

Table 2 --Share of private sector in agricultural output, Baltics

Commodity	1993	1994	1995	1996
<i>Percent</i>				
Latvia				
Grains, pulses	61.7	71.5	72.1	na
Sugarbeets	62.3	65.8	53.6	na
Potatoes	93.0	96.5	96.2	na
Vegetables	92.8	93.1	94.9	na
Meat	53.4	68.7	72.6	na
Beef/veal	44.6	65.9	72.1	na
Pork	67.0	78.3	79.1	na
Poultry meat	38.6	33.3	33.3	na
Milk	65.9	77.1	81.6	na
Eggs	27.1	30.6	30.7	na
Wool	96.1	97.1	98.0	na
Lithuania				
Grains	na	na	65.0	69.0
Sugarbeets	na	na	55.0	63.0
Flax	na	na	47.0	49.0
Potatoes	na	na	99.0	99.0
Vegetables	na	na	95.0	97.0
Meat	na	na	53.0	57.0
Milk	na	na	81.0	84.0
Eggs	na	na	29.0	32.0
Estonia				
Grains, pulses	37.1	37.4	na	na
Sugarbeets	na	68.9	na	na
Potatoes	83.9	85.8	na	na
Vegetables	88.0	88.7	na	na
Meat	42.2	39.6	na	na
Beef/veal	22.9	46.1	na	na
Pork	19.6	34.0	na	na
Poultry meat	8.8	21.6	na	na
Milk	35.5	41.1	na	na
Eggs	36.6	41.7	na	na
Wool	98.9	99.2	na	na

Sources: Agriculture in Latvia, Riga, 1995;
Agricultural Farms in Latvia, 1994, Riga, 1995;
Agriculture in Figures, Tallinn, 1995; OECD.

agricultural imports. Import of agricultural products into **Latvia** faces an average tariff of 40 percent *ad valorem*. Import tariffs for butter and cheese can be as high as 55 percent. Licenses are required to import or export grain. **Lithuania** continued to have a temporary export ban on wheat and flour in 1996. Moreover, food exports face high tariffs of up to 60 percent. Import tariffs range from 10 to 30 percent, although the government agreed with the IMF to reduce these in 1997.

Macroeconomic reforms have been particularly effective in restructuring Baltic agricultural output away from livestock products. In the Soviet period, the Baltic countries produced considerable quantities of livestock products in large complexes. Many livestock products were then exported to other NIS/B areas. The large complexes depended upon huge quantities of subsidized grain and meal imports from the Soviet Union in the 1970s-80s. After independence, agriculture's share of GDP has shrunk substantially, with livestock production falling faster than crop production. In **Estonia**, production agriculture as a portion of GDP has dropped from 17.8 percent in 1989 to 6 percent

Table 3 --Mean yields in private and state/collective farms, Estonia

Commodity	1992	1993	1994
<i>Centners/hectare⁴</i>			
Wheat			
Private ¹	20.7	23.2	16.2
Collective ²	20.5	20.6	16.8
Rye			
Private ¹	24.5	21.0	17.6
Collective ²	26.0	19.6	19.3
Barley			
Private ¹	13.4	23.7	15.8
Collective ²	12.6	24.8	16.2
Oats			
Private ¹	10.7	25.1	16.2
Collective ²	10.5	23.5	15.9
Potatoes			
Private ¹	146.2	135.5	144.4
Collective ²	143.7	122.3	138.7
Vegetables³			
Private ¹	135.9	132.1	166.3
Collective ²	118.6	126.0	154.3
<i>Kilograms/animal</i>			
Milk			
Private ¹	4,123	3,869	3,818
Collective ²	3,461	3,228	3,376
Wool			
Private ¹	2.2	2.3	2.9
Collective ²	2.1	2.3	2.9

¹ Peasant farms, household plots, and private subsidiary farms.

² Collective farms and statutory companies.

³ Open field vegetables.

⁴ Centner equals 100 kilograms.

Sources: Agriculture in Figures, Tallinn, 1995.

1996. In 1996, meat production in Estonia was 32 percent of its level in 1989. In **Latvia**, the portion of livestock production in total agricultural production (in current prices) fell from 66 percent in 1990 to 55 percent in 1995. This trend has been arrested in **Lithuania** in 1996, where agricultural production rose 15 percent. This is due to the introduction of support prices for agricultural commodities in 1995-96, as well as to the fact that crop production in that country is more concentrated in grains, compared to **Estonia** and **Latvia**. Grain production increased markedly in all three Baltic countries in 1996, mostly due to weather-related yield increases.

In matters of land reform, the Baltic countries have progressed further than other countries of the region, except for **Armenia** and **Georgia**. State and collective farms in the Baltic countries have been transformed into joint stock companies, and painstaking efforts have been made to restitute land to its pre-Soviet period owners. Farms in the Baltic countries are considerably larger than in the Caucasus. The average size of a private farm in **Estonia** and **Latvia** is 23.1 and 20 hectares, respectively. These farms produce primarily livestock products, wheat, and barley. **Lithuania** lags behind the other Baltic countries in matters related to

Table 4--Mean crop yields in private and former state/collective farms, Latvia

Crop		1990	1991	1992	1993	1994	1995
<i>Centners/hectare</i>							
Wheat							
Private	¹	26.3	26.6	25.8	20.0	21.1	21.4
Collective	²	26.3	26.3	26.8	19.5	21.8	24.8
Rye							
Private	¹	32.5	31.5	22.3	20.3	18.4	18.4
Collective	²	24.7	20.6	22.5	15.2	17.3	15.9
Barley							
Private	¹	30.0	25.2	14.6	17.8	18.6	14.7
Collective	²	22.0	18.3	10.4	14.7	16.8	12.2
Oats							
Private	¹	22.8	26.0	12.1	15.3	16.7	16.2
Collective	²	21.3	18.6	7.3	15.1	16.0	15.7
Sugar Beets							
Private	¹	336	262	185	243	178	230
Collective	²	296	258	189	254	221	317
Rapeseed							
Private	¹	11.5	12.5	9.3	15.2	8.8	na
Collective	²	20.1	12.2	10.5	15.1	7.9	na
Potatoes							
Private	¹	132	120	123	149	132	114
Collective	²	119	104	110	108	93	120
Vegetables							
Private	¹	133	161	130	149	127	121
Collective	²	152	134	88	131	145	171

¹ Peasant farms, household plots, and private subsidiary farm

² Collective farms and statutory companies.

³ Centner equals 100 kilograms.

Sources: Agriculture in Latvia, 1990-1994, Riga 1995;

Agricultural Farms in Latvia 1995, Riga 1996.

privatization of agricultural land. In 1996, the Lithuanian parliament suspended the enabling legislation for restitution.

Yields on private farms are comparable to those on former state or collective for crops, but rather better for livestock products. Table 2 shows the share of agricultural output (by commodity) which is produced on either private farms or on private plots. Tables 3 and 4 show that, except in sugarbeets, crop yields on private farms and private plots in the Baltic countries are generally comparable to those on former collective and state farms. A comparison of milk yields in **Estonia** shows the better results that are obtained from cows in private plots, versus those on state farms and joint stock companies. Similar results can be expected for meat yields.

Uzbekistan, Turkmenistan and Belarus: Lagging Macroeconomic and Land Reforms

The agricultural economies of **Uzbekistan**, **Turkmenistan**, and **Belarus** stand out as the region's least reformed. Both domestic and foreign trade remain largely unreformed in these countries. Moreover, economic restructuring of collective and state farms, as well as agricultural privatization, remain relatively undone. For instance, overall agri-

cultural production in **Turkmenistan** and **Uzbekistan** has declined since 1991, as expected, but crop production has fallen faster than livestock production. Moreover, agricultural output in these countries has not fallen as much as in, for instance, **Russia** or **Ukraine**, largely due to lack of reform.

Internal markets for agricultural commodities are considerably less free in **Uzbekistan**, **Turkmenistan**, and **Belarus**, than, for instance, in **Russia**. These countries have essentially preserved the Soviet system of state procurement for agricultural commodities, though procurement prices have risen lately. For instance, in Belarus, recommended procurement prices are based on costs of production estimates, and nearly the entire marketed grain crop is procured by the state. In **Uzbekistan** and **Turkmenistan**, nearly all marketed grain and cotton are procured at less than free market prices.

The trade regimes in **Belarus**, **Uzbekistan**, and **Turkmenistan** have changed least of all the NIS/B countries from Soviet times. In Belarus, there are export quotas for many crops, particularly grains and rapeseed, as well as minimum export prices for many products. A customs union with Russia abolished border controls with Russia, but import tariffs for non-NIS agricultural commodities were raised to correspond to Russian levels.

In **Belarus**, **Turkmenistan**, and **Uzbekistan** agricultural land also remains the least reformed in all the NIS/B region. There are few private farms, though subsidiary plots exist, as they did in the Soviet period. In **Turkmenistan** and **Uzbekistan**, private farms occupied a mere 1.5 and 2 percent of total agricultural land at the beginning of 1996. Most importantly, a consistent legal framework for the transformation of state and collective farms into joint-stock companies does not yet exist.

Since 1991, agricultural production in **Belarus** has declined 21 percent, less than in most other NIS/B countries. This is because Belarus has managed to maintain many of the Soviet era producer subsidies for former state and collective farms, as well as the procurement system. On the other hand, **Belarus** agriculture has followed the pattern of decline observed in other NIS/B countries. Meat and milk production there have declined considerably faster than crop production, by 40 and 30 percent, respectively.

Turkmenistan, **Uzbekistan**, and **Belarus** have followed another pattern of agricultural restructuring seen in the other NIS/B states. The share of livestock and crop production traditionally raised on private plots (such as meat, milk, wool, fruits, vegetables, and potatoes) has increased since 1991, although the principal field crops have remained on former state and collective farms.

Russia, Ukraine, Moldova: Macroeconomic Reforms, Paralyzed Land Reform

The majority of NIS/B countries lie somewhere in the middle between the nearly exclusively private agriculture of **Armenia** and **Georgia** and the nearly unreformed state agriculture of **Uzbekistan** and **Turkmenistan**. With the exception of **Tajikistan**, which continues to suffer from po-

litical and military turmoil and is not considered here, the countries of the middle have reduced inflation to double digits, liberalized domestic and foreign trade, begun restructuring former state and collective farms, and allowed the expansion of private agriculture. Macroeconomic reforms have restructured Russian, Ukrainian, and Moldovan agricultural production, just as they have in the other countries of the NIS/B region. Price liberalization and liberalization of domestic and foreign trade in **Russia, Ukraine, and Moldova** have resulted in a diminution of the share of agricultural output from livestock products since 1991. For example, in **Russia**, the portion of livestock output in total agricultural production (in current prices) fell from 63 percent in 1990 to 48 percent in 1995. However, genuine farm restructuring and land reform, leading to financially viable farms, has eluded these nations. The majority of former state and collective farms are loss makers and yet they are not liquidated by their creditors.

Domestic commodity market liberalization in **Russia, Ukraine, and Moldova** has been substantial, though not as thorough as in **Estonia** or the Caucasus. Table 5 shows the share of commodities marketed to state procurement organizations. In **Russia**, while agricultural commodity prices are freely determined, local and federal procurement still exists for a limited number of crops, usually at market prices. Moreover, local governments often block export of commodities until local procurement quotas have been fulfilled. Federal and local subsidies continue to exist for livestock products, fertilizer, fuel, electricity, farm machinery and some crops. However, the size of these subsidies (as a portion of GDP) has diminished considerably in the past 3 years.

In **Ukraine**, fixed producer prices were eliminated in 1994. Local and federal commodity procurement still exist, though state purchases are supposed to be made on commodity exchanges and by tender. However, the state exerts a great deal of control over the prices of the limited quantity of grain marketed through exchanges. Moreover, in the

past few years the state has banned grain exports (to keep procurement prices low) either formally or informally.

In **Moldova**, most producer prices were liberalized in 1993-95. However, government intervention remains strong in the markets for grain, milk, and bread. State grain procurement was reintroduced in 1996, though the grain procurement price is set near the market level. The state controls bread milling and baking margins, so that bread prices are regulated. Milk procurement prices are kept low by informal price controls, and retail milk prices are thereby kept low. In return, dairy farms receive subsidies for milk production in the form of tax reductions. Agricultural producers receive input subsidies through energy tariff reductions and input supply schemes.

Ukraine has relatively liberal trade policies for agricultural commodities. Agricultural export quotas have been removed, though grain exports were informally prohibited in 1996. There is currently no licensing of agricultural imports, import tariffs average 15 percent, and there is a VAT on imports. **Russian** trade policies for agricultural commodities are relatively liberal as well. There are currently no significant non-tariff barriers to imports or exports of agricultural products. Import tariffs on foods range from 0 to 30 percent (for poultry), and there are no federal export tariffs on agricultural commodities. Import tariffs for alcoholic beverages are much higher. In **Moldova**, exports of agricultural products require registration, and are subject to minimum prices. Grain exports are restricted to government-controlled organizations. Food imports from outside the NIS/B region face tariffs of 10 to 50 percent. Grain and fertilizer are imported by the government, which distributes them.

Farming in **Moldova, Russia, and Ukraine** is still predominantly on former state and collective farms (collectively owned as joint stock companies). In **Moldova**, private farms and household plots occupied only 18 percent of agricultural land in 1996. In **Ukraine**, private farms com-

Table 5--Changes in food marketing: Share of goods marketed by state procurement agencies, NIS countries

Country	Grains				Potatoes				Meat ¹				Vegetables			
	1990	1994	1995	1996 ²	1990	1994	1995	1996 ²	1990	1994	1995	1996 ²	1990	1994	1995	1996 ²
Percent																
Russia	76	33	28	35	61	34	35	27	na	69	61	56	74	57	54	47
Azerbaijan	na	62	62	75	na	68	68	94	na	69	49	29	na	91	57	59
Belarus	67	75	73	80	55	40	31	17	na	80	64	62	67	58	45	32
Kazakhstan	95	55	19	25	86	30	6	2	na	40	15	6	87	42	20	26
Kyrgyzstan	74	27	8	9	75	14	0	0	na	21	4	1	62	22	10	6
Moldova	36	16	17	32	28	3	3	1	na	32	15	10	75	50	38	29
Tajikistan	na	10	6	na	na	23	19	na	na	40	40	na	na	48	42	na
Turkmenistan	na	95	95	na	na	30	11	na	na	69	69	na	na	38	28	na
Ukraine	83	63	37	37	47	27	14	15	na	66	44	37	63	51	36	19
Uzbekistan	99	94	91	94	68	55	31	36	na	65	52	39	71	65	55	56

¹ Includes beef, pork, and poultry. ² January-September only.

Source: Statkom SNG.

prise a mere 2 percent of total agricultural land. Private subsidiary plots occupy another 16 percent of agricultural land. In these countries the legal structure for land privatization has been enacted, and former state and collective farms have been transformed into joint-stock companies.

Private plots have been allowed to expand, and now account for an even larger portion of the crops and livestock products that have been raised there traditionally. For instance, in **Russia**, 96 percent of potatoes, 89 percent of vegetables, 55 percent of pork, and 45 percent of beef are now produced either on private plots or farms (see annex).

However, land reform is immobilized. The number and area of private farms have stopped growing in **Russia**, largely because land earmarked for private farms has been distributed, and any further land must come from former state and collective farms. Three quarters of former collective and state farms in Russia are unprofitable (many of those hopelessly in debt), yet bankruptcy proceedings are generally not used to distribute farm assets and land to creditors. Instead, nearly every year the Russian government forgives or reschedules loans to these farms.

The Results of Macroeconomic Reform Without Land Markets

Macroeconomic policy changes have caused economic restructuring, the primary reform affecting agriculture in the NIS/B countries. Changes in specifically agricultural policies, such as land reform, seem to have been peripheral to this structural change. The decline of the livestock sector has occurred in countries with such diverse agriculture as **Belarus** (still dominated by state and collective farms) and **Armenia** (with completely private farming).

The lack of land reform in the NIS/B countries limits potential improvements to the productivity of resource use. Lack of land markets does not allow land to perform three functions fundamental to productive use of resources in agriculture. First, by assigning a positive price to land, markets curtail its wasteful overuse. Second, markets allow land to be used as collateral for investment loans; their lack limits investment in agriculture. Third, markets for land and provisions for bankruptcy provide an incentive to management to avoid insolvency. Without this credible threat, management may find it more in its interest to pursue private enrichment or maintain employment, neither of which is consistent with the long term productive use of resources.

NIS/B Farm Sector Continues Adjustment to Market Forces; U.S. Agricultural Exports to Region Post Recovery

After 5 years of market reforms, NIS/B grain production now appears to be stabilizing, and the region is no longer a significant destination for grain exporters. The United States, having adjusted to the collapse in grain sales to the region, has now positioned itself as the NIS/B region's largest meat supplier. [C. Foster—Coordinator, O.Liefert—Livestock, J. Mitchell—Grains and Trade, R. Hoskin—Other Crops]

U.S. Agricultural Exports Adjust to Region's Restructuring

U.S. agricultural exports to the NIS/B region are forecast to rise over 10 percent from fiscal 1996 (October/September) to fiscal 1997, to just under \$2 billion. While a marked recovery from the fiscal 1995 low of \$1.2 billion, export value is still well below the 1989 peak when sales totaled more than \$3 billion (table 6). U.S. fiscal 1997 agricultural exports to the region are expected to rise for the second year after a sharp downturn that followed the breakup of the USSR and the region's introduction of economic reforms. The increase in U.S. farm sales has, however, been far outstripped by dramatic growth in non-agricultural exports, such as machinery and transport equipment (figure 1). U.S. agricultural exports, which made up over 80 percent of total U.S. exports to the region throughout the 1980's, now account for about a third of total sales. Poultry meat, the single largest U.S. export to the

region (farm and non-farm exports included), accounting for more than one-half of total agricultural exports, has fueled this growth. The value of U.S. poultry meat shipments to the NIS/B countries almost doubled from fiscal 1995 to fiscal 1996, to nearly \$1.0 billion, with **Russia** absorbing more than 85 percent. Other than the dramatic rise in meat exports to the NIS/B region, U.S. sales of consumer-ready products such as fresh and processed fruits and vegetables, nuts, and beverages have shown the most growth since the introduction of market reforms.

LIVESTOCK OUTLOOK

Meat To Remain Region's Primary Import

As **Russia** and the other NIS/B countries have moved from centrally planned to market-driven economies, direct meat imports have replaced the massive imports of grain that supplied an overexpanded, inefficient, and highly sub-

Table 6--U.S. agricultural exports to NIS/B region and Russia, fiscal 1993-97

Commodity	Total NIS/B					Russia				
	1993	1994	1995	1996	1997 ²	1993	1994	1995	1996	1997 ²
\$ million										
Wheat	566	257	117	184	53	275	92	62	42	8
Corn	493	275	13	10	13	336	242	1	10	4
Soybeans	10	5	25	3	--	--	--	16	--	--
Soybean meal	111	171	39	55	9	82	130	3	2	--
Pork	1	29	63	43	26	0.8	28	63	42	26
Poultry meat	27	282	533	958	568	27	258	504	840	491
Dairy products	120	129	65	39	6	83	93	42	20	6
Fruits, nuts, veg.	38	69	61	77	37	26	55	50	67	28
Sugar & trop. prods.	46	107	36	31	11	44	104	33	28	10
Other	149	162	208	265	150	91	102	138	200	114
Total	1,561	1,486	1,158	1,665	874	965	1,104	911	1,251	688
1,000 tons										
Wheat	4,529	2,183	712	875	299	2,196	762	391	207	45
Corn	4,965	2,640	115	58	112	3,380	2,337	9	58	36
Soybeans	46	19	107	17	--	--	--	65	--	--
Soybean meal	541	810	206	232	33	384	612	15	5	--
Pork	0.3	18	42	27	13	0.3	18	42	27	13
Poultry meat	221	336	662	1,030	597	43	315	625	910	524
Dairy products	83	95	34	45	na	49	76	24	11	na
Sugar & trop. prods.	20	53	27	10	na	20	52	25	9	na

-- = Negligible or none.

¹ October-September.

² October 1996-March 1997.

Source: USDA

Meat Producers Bypass Processors

Inefficiencies in the region's meat processing industry are a major factor contributing to the uncompetitiveness of NIS/B meat products. Relative to its high production costs, the industry has added little quality and economic value to its output (as measured by consumers' desire for the final product). The processing sector's output has been inferior to that of many imports in terms of packaging and appearance, shelf-life, and ease of preparation. Since reform began, the percent decline in output of the meat processing industry has been about twice the percent drop in both primary production and consumption of meat products. Since 1991, aggregate NIS/B output of processed meat products has fallen nearly 75 percent (table 7). In the **Caucasus** countries, the industry has almost ceased operations, with output down nearly 95 percent. The smallest decline in processed meat output in the region has been in **Russia** and **Belarus** (around 65 percent).

One way processors have responded to growing foreign competition has been to lower the prices paid to domestic producers of primary output. Given the lower prices offered by the processing sector, along with delays in payment, livestock producers are increasingly marketing or bartering meat directly to consumers. In **Kazakstan**, **Kyrgyzstan**, **Moldova**, **Armenia**, **Georgia**, and **Azerbaijan**, the share of meat either sold in farmers' markets or bartered now exceeds 70 percent of total marketed production. In **Russia**, the share rose from 30 percent in 1994 to 44 percent in 1996, while the share in **Belarus** in 1996 was 38 percent, the lowest among the NIS/B countries. The direct marketing of output from producers to consumers is evidence of market reforms, as producers find alternative marketing channels in place of selling output solely to former state processing enterprises, as was required during the Soviet period. On the other hand, a livestock economy in which the bulk of meat output does not pass through a processing industry will never be technologically and commercially developed.

The perishability of meat limits the amount of unprocessed product that can be marketed directly to consumers. Small processing enterprises have recently emerged to meet this need, generally producing higher quality output than the large processing plants. Although small processors face high production costs and therefore charge higher prices for their output, they usually serve small rural markets, and do not face as much competition from imports. An increase in the number of small-scale processors could expand the amount of meat processed and marketed, competing with the large-scale former state processing industry.

In the face of declining purchases from domestic producers, large **Russian** processors have turned to imports of unprocessed product to fill their processing capacity (currently less than 50 percent in use). Not only is imported meat often less expensive (when all transaction costs are accounted for), but imports are generally more reliable in terms of delivery and uniformity. Since 1992, Russian imports of beef and pork, used mainly for processing, have increased by roughly 150 percent.

Table 7 --Processed meat output, NIS countries

	1,000 tons	Percent change ¹		1,000 tons	Percent change ¹
NIS total			Moldova		
1991	10,670		1991	219	
1992	8,612	(19.3)	1992	165	(24.7)
1993	7,095	(17.6)	1993	94	(43.3)
1994	5,651	(20.3)	1994	47	(49.4)
1995	4,008	(29.1)	1995	33	(30.6)
1996	2,900	(27.6)	1996	27	(18.5)
1996 to 1991		(72.8)	1996 to 1991		(87.8)
Azerbaijan			Russia		
1991	48.1		1991	5,815	
1992	28.2	(41.4)	1992	4,784	(17.7)
1993	16.5	(41.5)	1993	4,099	(14.3)
1994	9.9	(40.0)	1994	3,282	(19.9)
1995	5.6	(43.4)	1995	2,416	(26.4)
1996	3.3	(41.1)	1996	1,887	(21.9)
1996 to 1991		(93.1)	1996 to 1991		(67.5)
Armenia			Tajikistan		
1991	43.7		1991	38.5	
1992	3.8	(91.3)	1992	19.4	(49.6)
1993	8.6	126.3	1993	11.1	(42.8)
1994	0.8	(90.7)	1994	3.9	(64.9)
1995	0.1	(87.5)	1995	1.7	(56.4)
1996	na	na	1996	0.9	(47.1)
1996 to 1991		(99.8)	1996 to 1991		(97.7)
Belarus			Turkmenistan		
1991	792		1991	36.8	
1992	664	(16.2)	1992	36.1	(1.9)
1993	554	(16.6)	1993	37.3	3.3
1994	468	(15.5)	1994	28.6	(23.3)
1995	375	(19.9)	1995	18.1	(36.7)
1996	279	(25.6)	1996	10.2	(43.6)
1996 to 1991		(64.8)	1996 to 1991		(72.3)
Georgia			Uzbekistan		
1991	31.2		1991	225.0	
1992	5.3	(83.0)	1992	156.0	(30.7)
1993	0.7	(86.8)	1993	140.0	(10.3)
1994	0.3	(57.1)	1994	103.0	(26.4)
1995	0.1	(83.3)	1995	40.7	(60.5)
1996	0.0	(60.0)	1996	22.1	(45.7)
1996 to 1991		(99.9)	1996 to 1991		(90.2)
Kazakstan			Ukraine		
1991	846		1991	2,488	
1992	633	(25.2)	1992	2,050	(17.6)
1993	609	(3.8)	1993	1,482	(27.7)
1994	398	(34.6)	1994	1,291	(12.9)
1995	263	(33.9)	1995	846	(34.5)
1996	171	(35.0)	1996	496	(41.4)
1996 to 1991		(79.8)	1996 to 1991		(80.1)
Kyrgyzstan					
1991	86.8				
1992	67.5	(22.2)			
1993	42.8	(36.6)			
1994	18.3	(57.2)			
1995	9.2	(49.7)			
1996	4.1	(55.4)			
1996 to 1991		(95.3)			

¹ Percent change from the previous year.

na = not available.

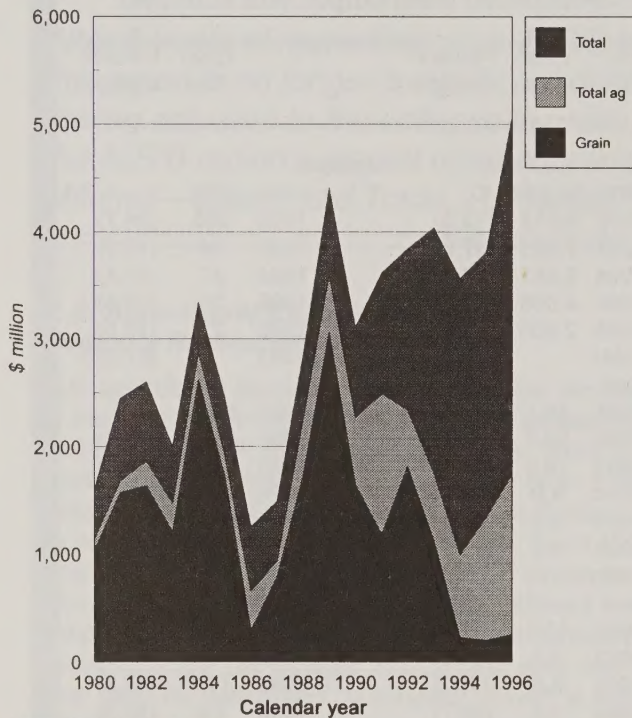
Source: Statcom SNG.

Major Livestock Producers Have Not Hit Bottom Yet

In **Russia** and **Ukraine**, livestock producers' terms of trade started to improve in 1994 and 1995 and are likely beginning to stabilize (figures 2, 3). However, as state-controlled energy and fuel prices are further raised toward world market prices, some additional changes in the price-cost squeeze may occur. There are also some indications that both feed productivity (feed conversion rates—the amount of feed used per kilogram of animal weight gain) and animal productivity in Russia and Ukraine are stabilizing and starting to improve in some cases (figure 4). With relative prices no longer moving against them, producers will not be compelled to continue to substitute inferior, though less expensive, feeds for the higher quality but more expensive types, thereby helping to stabilize animal productivity. Significant efficiency growth in the animal sector, however, will likely require more substantial institutional reforms within the agricultural and food economy to strengthen incentives for former state and collective farms to use inputs more efficiently and lower costs. Given the political conservatism of the agricultural establishment in Russia and other NIS countries, major structural reforms are not likely in the foreseeable future.

Several factors may lessen, although not halt, the contraction of **Russia's** livestock sector in 1997. An increased 1996 Russian grain harvest, and an anticipated 1997 crop of similar size, should contribute to stable feed costs. Larger reported forage supplies per animal head going into the year should also benefit producers. Additionally, the growing pressure of competition and other market forces should further motivate producers to increase efficiency. In

Figure 1
U.S. Exports to NIS/B Region

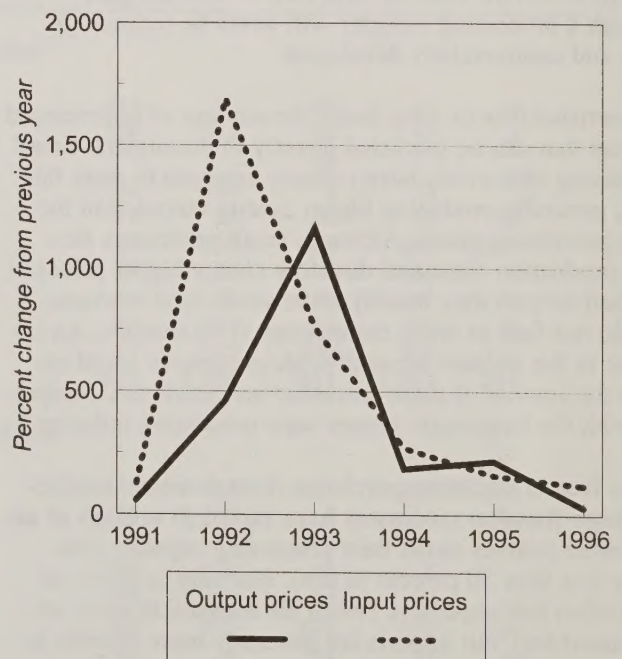


Source: USDA, U.S. Department of Commerce.

sized livestock sector. In 1996 extra-NIS/B meat imports to the region reached 2 million tons, roughly half of them poultry. **Russia** accounts for about 95 percent of extra-NIS/B meat imports. Extra-NIS/B meat imports have risen about five times from 1992 imports, while intra-NIS/B meat trade has decreased, as producers are less able to compete with foreign suppliers. Until NIS/B producers are able to compete with exporting countries, in both price/cost and quality, the NIS/B region is likely to remain one of the world's largest meat importing areas.

Uncompetitiveness, resulting from high domestic production and marketing costs, and a steep decline in consumers' real income, have been mainly responsible for the severe downsizing of the NIS/B's livestock sector. In 1996, aggregate NIS/B animal inventories and meat production were both down for the seventh straight year. Since 1991, total NIS/B cattle inventories have decreased 34 percent (with cows down 16 percent), hogs 47 percent, and poultry 45 percent (see annex). Due to reduced inventories and a decline in animal productivity (output per animal), meat production dropped sharply in all NIS/B states. Since 1991, total meat (beef, pork, and poultry) output has dropped almost 45 percent (see annex). Poultry meat production has declined the most at 60 percent, followed by pork at almost 50 percent, and beef at nearly 40 percent. Though the livestock sector in the NIS/B region as a whole is still contracting, the outlook for the sector varies widely among countries.

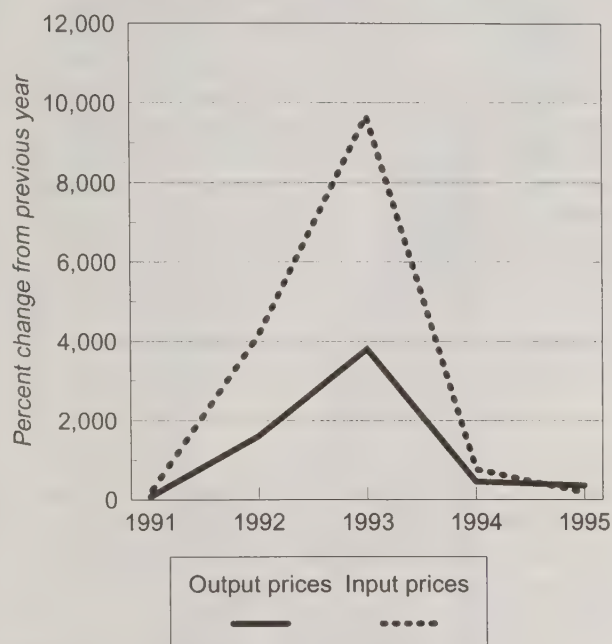
Figure 2
Input and Output Price Changes,
Livestock Sector, Russia



Note: based on input prices for mixed feed, and output prices for all meats.
Source: Ministry of Agriculture; Goskomstat Rossii.

Figure 3

Input and Output Price Changes, Livestock Sector, Ukraine



Based on input prices for all industrial goods, and output prices for livestock products.
Sources: Ukraina v tsifrah, 1995; Sil'ske gospodarstvo, 1996.

Ukraine, meat output in 1997 could contract more than in 1996, as producers face high feed prices caused by 1996's near record-low grain crop, while consumers' real per capita income continues to fall, trailing the decrease in GDP. Although **Kazakhstan's** livestock sector could benefit somewhat from the 15-percent increase in 1996 grain output, animal inventories are likely to decline further due to low profitability of livestock farms and falling demand.

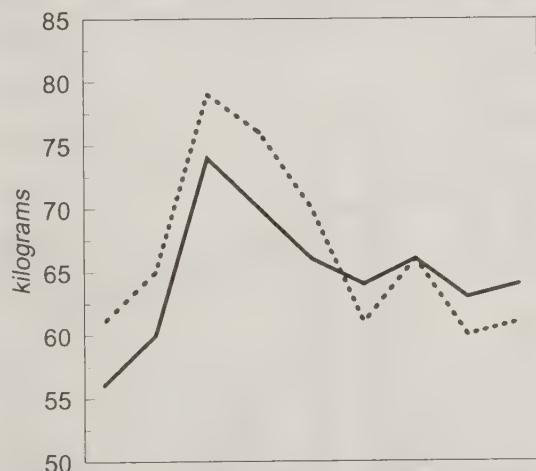
Limited Gains in Productivity Point To Continued Imports

Foreign meat suppliers, particularly of poultry meat, are unlikely to lose their market share even as economic recovery begins in the region. In 1996, real income in **Russia** grew 2 percent, despite an official decrease in GDP of 6 percent. Forecasts show that real GDP could stop falling in the next 1-2 years, and by 2000 the Russian economy could be annually growing in real terms by 3-4 percent, further boosting real incomes. (**Ukraine** and **Kazakhstan** tend to follow **Russia** in terms of macroeconomic performance with a few years delay.) As demand for meat is fairly sensitive to changes in income, real income growth should disproportionately stimulate demand for meat relative to other foods.

However, **Russia** has been uncompetitive in meat production vis-a-vis the world market in terms of both price and quality. The most uncompetitive meat has been poultry, which has led to surging imports (figures 5, 6, 7). After poultry, domestically produced pork has increasingly become less competitive vis-a-vis imports. Higher prices for

Figure 4

Annual Meat Output per Cattle *, Russia and Ukraine

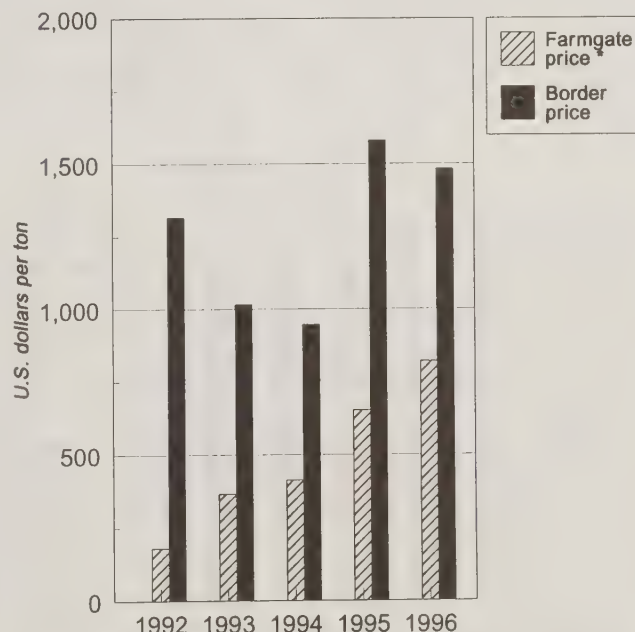


	1980	1985	1990	1991	1992	1993	1994	1995	1996
Russia —	56	60	74	70	66	64	66	63	64
Ukraine **	61	65	79	76	70	61	66	60	61

* Calculated (output divided by inventories beginning of the year)
Sources: Goskomstat, Statkom SNG.

Figure 5

Beef Prices in Russia

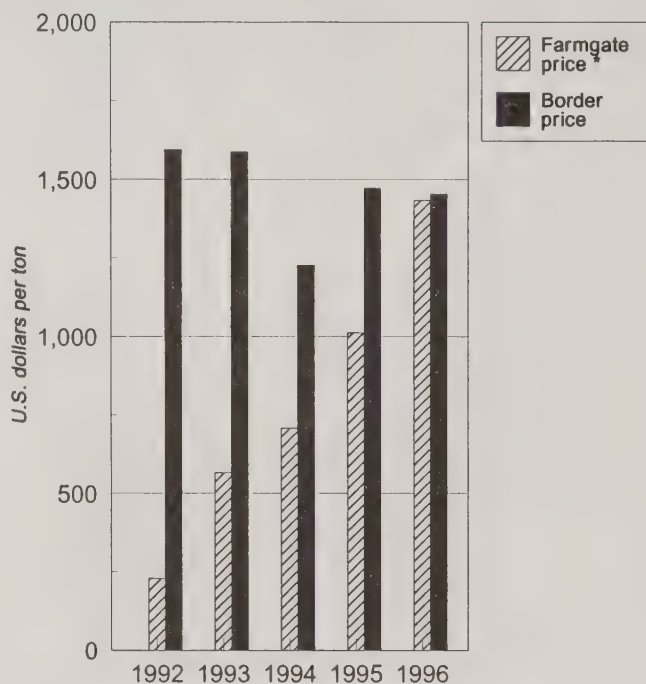


* = Farmgate prices (vyruchka) include subsidies.

Sources: Russian Ministry of Agriculture, Customs Committee, Goskomstat.

Figure 6

Pork Prices in Russia



* = Farmgate prices (vyruchka) include subsidies.

Sources: Russian Ministry of Agriculture, Customs Committee, Goskomstat.

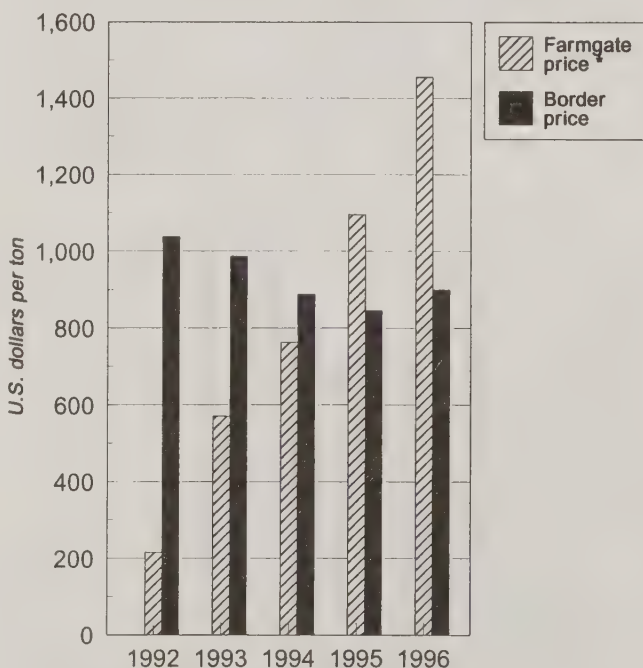
domestic meat products result from lower productivity and much higher transaction costs due to poorly developed processing and marketing infrastructure. Quality differences primarily involve the inferior packaging, shelf-life, and ease of preparation of domestically produced meat products. While Russian meat consumption has fallen substantially since reform began due to falling real incomes, meat imports have increased, not only as a share of total Russian meat consumption, but also in absolute volume (figure 8). From 1992 to 1996, total Russian meat imports have more than tripled, while their share in domestic meat consumption is estimated to have increased from about 8 to 35 percent (reaching more than 50 percent for poultry) (figures 9, 10). When consumer demand for livestock products increases due to rising incomes, projected growth in domestic meat production probably will still be insufficient to meet total demand, resulting in steady meat imports.

One development that may improve the price competitiveness of Russian meat production in 1997 is that the ruble at the end of 1996 had stopped appreciating in real terms vis-a-vis Western currencies, mainly because the inflation rate has fallen substantially, to only 20 percent in 1996. In most other NIS/B countries currencies continue to appreciate in real terms, but to a diminishing degree, thereby reducing the effect of exchange rate movements on the relative prices between imports and domestic output.

Russia's near- to medium-term meat imports from extra-NIS/B sources are projected to remain around 2 million

Figure 7

Russian Poultry Price Gap Widens



* = Farmgate prices (vyruchka) include subsidies.

Sources: Russian Ministry of Agriculture, Customs Committee, Goskomstat.

Figure 8

Per Capita Meat Consumption Falls as Income Declines, Russia

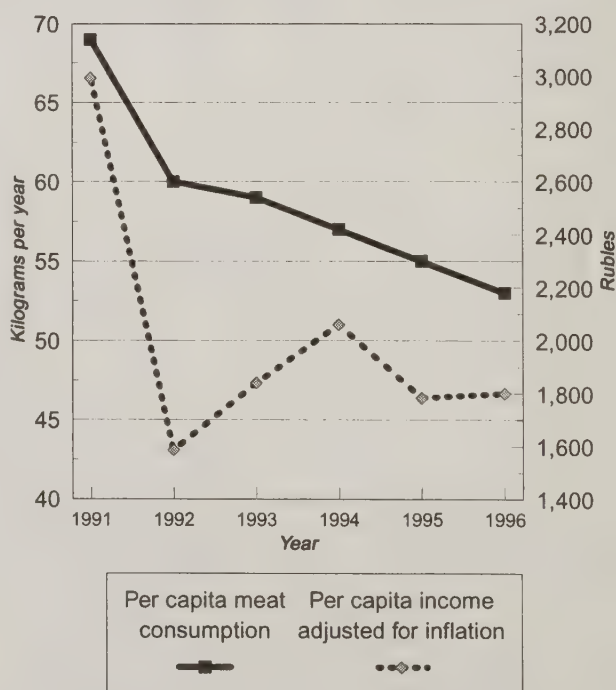
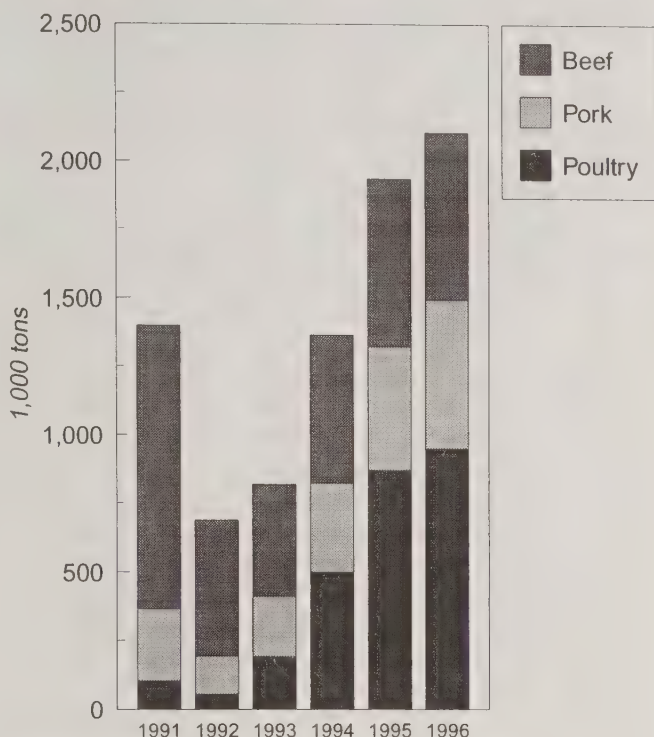


Figure 9

Total Meat Imports, Russia



Sources: Goskomstat, Customs statistics, USDA estimates.

tons. At least half of these imports are forecast to be poultry, with the bulk (around 80 percent) coming from the United States (table 8). The European Union (EU), which held a nearly 20-percent share of the poultry market in 1996, continues to slowly increase its position. The EU dominates **Russian** extra-NIS/B imports of beef (more than 80 percent in 1995 and 1996), while China's share rose to about 10 percent in 1996. China is the primary pork exporter to Russia, accounting for nearly half of extra-NIS/B supplies, with Eastern Europe in second place with about a quarter of the market.

During the Soviet period, about 40 percent of **Russia's** meat imports came from other parts of the USSR—that is, from what are now other NIS/B countries. However, by 1996 these nations were supplying only 15 percent of Russia's meat imports. In 1996, meat exports by both **Kazakhstan** and **Belarus** to Russia fell 45 percent from the previous year, while those of **Ukraine** stayed flat. These countries are losing market share in Russia to extra-NIS/B suppliers for the same reasons that Russian domestic producers are losing market share.

While not currently likely, increased protectionism in the future could alter the outlook for meat exports to the region. **Russia** currently levies import duties of 15 percent on red meats and 30 percent on poultry (minimum per unit tariffs on meat are also administered), but there are no federal quotas or other federal quantitative controls on meat imports. While pressure by domestic producers to raise trade barriers remains strong, significantly higher protectionism is not expected. The largest consumers of imported meat, the politically powerful cities of Moscow and St. Petersburg, remain opposed to import restrictions. Another restraint on protectionist pressure is Russia's interest in joining the World Trade Organization. It is also possible that the newly formed (April 1997) reformist government in Russia will not be as willing to protect agriculture from import competition, realizing that protection reduces domestic industry's incentives to improve efficiency and quality of production.

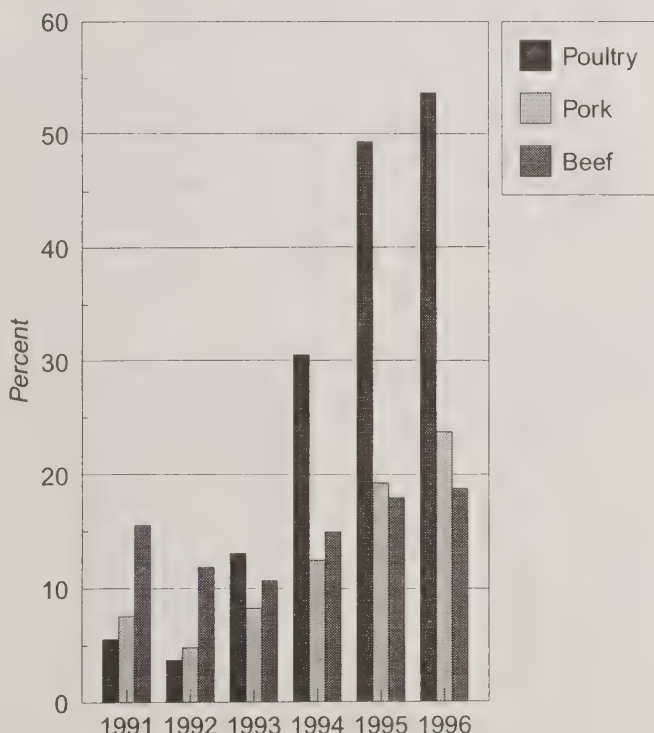
Caucasus Countries Begin Recovery

Foreign trade in meat in the Caucasus republics of **Georgia**, **Armenia**, and **Azerbaijan** is comparatively modest, relative to even these countries' small size. Net meat imports from beyond the region are about 25,000-35,000 tons (compared to total domestic output of 250,000 tons). Trade in meat between these nations is also low. For the second straight year, the three Caucasus countries, and especially **Armenia** and **Georgia**, showed growth in GDP and agriculture, in particular the livestock sector. During 1991-94 the countries were in political and ethnic turmoil, such that GDP in Georgia fell 75 percent, and in Armenia and **Azerbaijan** about 60 percent. Agricultural output fell less, though still 50 percent, in Georgia. The main reasons why the economic indicators are improving for these countries are the return to relative political and social stability and implementation of major economic reforms, such as large-scale privatization of agriculture.

To a much greater degree than in the large meat producing NIS/B countries, the livestock sectors in **Georgia** and **Ar-**

Figure 10

Share of Imports in Russian Consumption



Source: USDA estimates.

Table 8 --Meat imports by origin and type, Russia

	1994	1995	1996	1994	1995	1996	1994	1995	1996
	1,000 tons			Millions \$			1,000 dollars per ton ²		
Beef and veal, frozen (02.02)									
Total imports	354	375	414	335	593	614	946	1,581	1,483
Intra-NIS	206	182	195	180	305	306	874	1,676	1,569
Ukraine	129	156	173	112	213	272	868	1,365	1,569
Belarus	50	na	na	47	na	na	940	na	na
Kazakhstan	17	22	17	13	88	25	765	4,000	1,479
Moldova	9	3	5	7	3	9	778	1,000	1,630
Extra-NIS	149	193	218	154	288	308	1,034	1,492	1,413
Ireland	63	86	67	37	128	103	587	1,488	1,530
Germany	30	51	59	42	77	73	1,400	1,510	1,253
France	37	12	15	44	16	18	1,189	1,333	1,219
Denmark	2	10	11	3	15	13	1,500	1,500	1,165
Netherlands	1	5	10	1	6	11	1,000	1,200	1,137
China	7	6	17	9	10	28	1,286	1,667	1,649
U.S.	1	5	5	3	10	10	3,000	2,222	2,082
U.S. share (%)	0	1	1	1	2	2			
Pork, frozen or refrigerated (02.03)									
Total imports	212	309	302	260	455	439	1,226	1,472	1,454
Intra-NIS	14	9	19	14	14	35	1,000	1,556	1,862
Ukraine	2	3	7	2	5	13	1,000	1,667	1,850
Moldova	5	4	10	5	6	19	1,000	1,500	1,976
Extra-NIS	198	299	283	246	441	404	1,242	1,475	1,430
Germany	46	24	9	55	30	16	1,196	1,250	1,824
Romania	44	26	22	51	43	33	1,159	1,654	1,464
Denmark	21	47	34	27	58	26	1,286	1,234	749
China	47	95	108	57	150	183	1,213	1,579	1,700
U.S.	--	54	20	1	71	18	--	1,315	891
U.S. share (%)	0	17	7	0	16	4			
Poultry, fresh, refriger., or frozen (02.07)									
Total imports	501	825	750	445	697	507	888	845	675
Intra-NIS	5	2	2	4	2	4	800	1,000	2,316
Belarus	3	na	na	3	na	na	1,000	na	na
Kazakhstan	1	--	--	1	--	--	1,000	--	--
Extra-NIS	496	824	748	441	695	502	889	843	671
Netherlands	48	73	52	45	49	32	938	671	610
Poland	25	20	3	25	16	2	1,000	800	702
Belgium	5	10	13	5	6	9	1,000	600	666
Germany	7	12	4	8	9	4	1,143	750	890
France	9	37	45	10	35	35	1,111	946	773
Baltics	3	15	--	3	14	--	1,000	933	--
U.S.	366	618	588	308	541	388	842	875	660
U.S. share (%)	73	75	78	69	78	77			
Sausages, hotdogs (16.01)									
Total imports	86	112	na	175	173	na	2,035	1,545	na
Intra-NIS	5	1	na	9	2	na	1,800	2,000	na
Ukraine	2	1	na	3	1	na	1,500	1,667	na
Belarus	3	na	na	5	na	na	1,667	na	na
Extra-NIS	81	111	na	167	171	na	2,062	1,541	na
Poland	12	21	na	17	30	na	1,417	1,429	na
France	4	13	na	8	9	na	2,000	692	na
U.S.	11	39	na	16	61	na	1,455	1,564	na
U.S. share (%)	13	35	na	9	35	na			
Other prepared meats (16.02)									
Total imports	270	293	122	408	453	211	1,511	1,546	1,730
Intra-NIS	69	42	33	54	72	68	783	1,714	2,089
Ukraine	34	32	27	34	53	55	1,000	1,656	2,075
Kazakhstan	8	7	3	9	14	7	1,125	2,000	2,300
Belarus	18	na	na	8	na	na	444	na	na
Extra-NIS	201	251	91	354	381	144	1,761	1,518	1,591
Poland	18	20	5	28	26	9	1,556	1,300	1,750
Germany	12	19	5	22	32	11	1,833	1,684	2,000
Netherlands	14	17	6	21	20	7	1,500	1,176	1,133
France	14	29	9	30	35	15	2,143	1,207	1,574
China	59	67	28	93	124	43	1,576	1,851	1,552
U.S.	8	19	7	13	23	8	1,625	1,211	1,235
U.S. share (%)	3	6	6	3	5	4			

¹ Numbers may not add due to rounding.² Calculated. na = not available. -- = negligible. Source: State Customs Committee, Russia.

Market Forces Alter Marketing Bill for Meat

Market reforms in the NIS/B region have caused a significant shift in the meat marketing bill (the share of the retail price for meats received by processors, wholesalers, retailers). The primary producers' share of the retail meat price has fallen, while the share held by downstream enterprises (processors, etc.) has risen. In response, primary producers have argued that downstream enterprises act as monopsonies, using their market power to obtain a higher share of the total return from production and distribution within the food economy, while farmers receive a less than fair share.

During the Soviet period, downstream activities in the food economy were undervalued. Prices were centrally determined and reflected the belief that only primary production added substantial value to goods. Since trade and distribution do not involve "physical production," it was believed that their contribution to the creation of value was marginal. As a result, farms received a disproportional share (estimated at about 80 percent) of the retail price of food products in aggregate, compared to about 25 percent in the United States. Downstream activities received such a low share in the retail price that they could only function with large state subsidies, which increased their real share of the total income generated within the food economy. Market reforms have changed the distribution of revenue earned within the food economy, such that it better reflects the contribution of various activities to their real value added. In 1995 the farmers' share of retail meat prices had fallen to about 50-60 percent, but it remained much higher than the 35 percent received by meat producers in the United States.

Market reform changed not only the distribution of revenue based on real value added, but also the nature of the real value added. In responding to market incentives, the underdeveloped processing and, especially, trade sectors have begun gradually to improve the range and quality of their activities, in areas such as packaging, product variety, advertising, marketing, and customer service. The share of these operations in the retail price has risen.

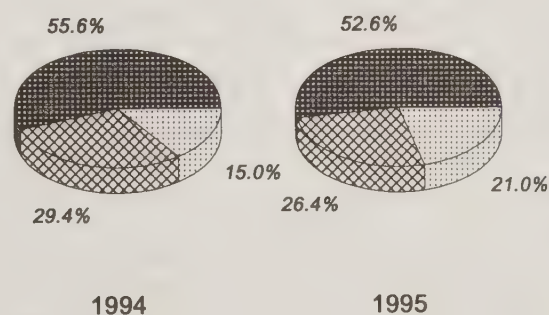
Throughout the world the meat processing industry has tended to be highly concentrated, which gives individual processors potential market power. Market economies deal with this problem mainly through anti-trust

legislation and free trade, which creates competition for domestic producers. During the early reform years, NIS/B processors, which during the Soviet period were state monopolies, likely had a significant amount of market power (particularly at the local level) and used it to their advantage at the expense of farms. Market reform, however, is increasing competition for processors, because of an increase in the number of domestic smaller-scale processing enterprises and growing foreign trade. Current data appear to indicate that **Russian** processing enterprises do not necessarily wield excessive market power. For example, the share of processing in the retail meat price is still below that in many market countries. Moreover, it is retailers', not the processors', share in the Russian marketing bill that is increasing (figure 11).

The continuation of market reforms in the NIS/B region is likely to further reduce the share of primary meat producers in revenue generated by the food economy, as distribution comes to better reflect real value added.

Figure 11

Farmers' Share in Retail Pork Price is Declining As Well as Processors', Russia



■ Primary production ▨ Processing ▩ Retail

Source: Goskomstat, Ekonomicheskaya kon'unktura.

menia have been dominated by private production (mainly cattle and sheep) for both subsistence needs and direct marketing of livestock products. Even before the collapse of the former Soviet Union, a large share of livestock in these countries was slaughtered and consumed on farms, or marketed/bartered directly, rather than sold to processors. Currently, nearly all output bypasses large-scale processing, and is marketed/bartered either unprocessed, or is processed at local small enterprises and then sold directly to consumers. Mainly for this reason, privatization and related restructuring in the sector have been implemented without major disruptions to production (except for the hog industry, where the bulk of inventories was held in big state-owned complexes). The contraction of the livestock sector in these countries has bottomed out ahead of other NIS/B states. In 1997 meat output is forecast to grow around 20 percent in Georgia, and 5-10 percent in Azerbaijan and Armenia. Poultry production in these countries has by now become almost exclusively concentrated in the private sector, and is rebounding.

Least Reformist Countries Put Off Inevitable

After Russia, **Uzbekistan** and **Turkmenistan** are the biggest meat importers in the NIS/B region. In 1996, imports accounted for 10 percent of meat consumption in Uzbekistan, and about 30 percent in Turkmenistan. Except for their hog sectors, which prior to the breakup of the USSR were dependent on subsidized feed from other NIS countries, these two countries have experienced very little downsizing of their livestock sectors. In fact, since 1991, cattle inventories in the two republics have increased. By not pursuing significant market reforms, these countries have shielded the livestock sector (as well as the rest of the economy) from both the demand and supply side shocks (mainly falling consumer demand, worsening terms of trade from price liberalization, and exposure to foreign competition) that have caused restructuring in the more reformist NIS/B countries. Given little likelihood that the pace of reforms will pick up in these countries in the near term, significant changes in inventories or output are not expected.

Belarus, one of the major livestock producers and exporters among the NIS/B countries, follows a pattern similar to that of Turkmenistan and Uzbekistan. Belarus' GDP, agricultural production, and livestock output have all contracted less than that of **Russia**, **Ukraine**, **Kazakhstan**, **Moldova**, and the **Baltics**. One reason is that Belarus has resisted introducing market reforms, choosing instead to maintain price controls, support to agriculture, and delivery quotas. However, Belarus' livestock sector has contracted more than that in **Uzbekistan** and **Turkmenistan**, as its meat production was geared to exports to Russia, where it is no longer as competitive.

GRAIN OUTLOOK

NIS/B Grain Output Stabilizing; Grain Imports To Remain Marginal

While centrally planned, non-market policies helped make the NIS/B region a major world grain importer in the 1970s and 1980s, market-oriented reforms in the 1990s have reduced these imports to record low levels. Reduction in policy and physical infrastructure barriers in the coming

decade could boost grain exports, keeping regional net grain imports at less than 5 million tons per year. Production, which may have stabilized after declining sharply during the adjustment to market price reforms of the mid-1990s, is expected to recover only gradually. Even slower recovery in use, which continues to contract owing to weak demand from a downsizing livestock sector, will likely restrain growth in regional grain imports in coming years, keeping them at just a fraction of the more than 30 million tons imported by the USSR annually during the 1980s.

Net grain imports by the NIS/B countries are estimated down from about 5.5 million tons in 1995/96 (July/June) to below 4 million tons in 1996/97, and are unlikely to change significantly in 1997/98 (table 9). Net wheat imports from the world market fell to a record low of under 3 million tons estimated for 1996/97 in the wake of a strong **Russian** harvest and higher wheat production in most other countries as well. A large estimated increase in **Ukrainian** wheat area in 1997, as well as relative prices that continue to favor wheat over coarse grains, should keep the NIS/B region's net wheat imports at 3 million tons or less in 1997/98. Net coarse grain imports, which have averaged less than 1 million tons over the past 3 years, are unlikely to change significantly in 1997/98 given continued contraction of the livestock sector.

In the grain-deficit countries of the **Caucasus** and **Central Asia**, import demand (most of which is satisfied by wheat purchases outside the NIS/B region) is likely to remain stable in 1997/98 at around 1.5 and 3 million tons, respectively. Commercial imports, which have become cheaper since prices eased in late 1996, will likely replace at least part of the reduction in planned 1997/98 food assistance to the NIS/B region. U.S. wheat exports to the NIS/B region, which have found niches in the **Uzbek** and **Russian** Far Eastern markets, increased from about 0.7 million tons in 1994/95 to around 0.9 million in 1995/96.

After losing a very large but volatile former Soviet market following the breakup of the Soviet Union and the 1992 introduction of reforms, U.S. feed grain producers are indirectly recovering some of their sales through large U.S. meat exports. An estimated 2 million tons of U.S. corn is being "exported" to **Russia** annually in the form of poultry and pork shipments to that country. Continued Russian demand for U.S. poultry meat should keep these indirect grain imports steady in the near to medium term. Gradual recovery of the region's livestock sector could lead to increased corn imports, but with no return to the high levels typical of the 1970s and 1980s.

While the NIS/B region is likely to remain a modest net grain importer in the foreseeable future, reduced policy barriers to free grain flows and investment in transport and infrastructure to lower grain marketing costs could boost future NIS/B grain exports. Grain exports outside the region, negligible during the Soviet era, averaged nearly 1 million tons annually between 1994/95 and 1996/97. These exports consisted mainly of feed grains (wheat and barley) sold by **Russia** and **Ukraine** to Europe and the Middle East, though **Kazakhstan** exported food wheat to Afghanistan. NIS grain exports are primarily driven by higher prices on the world market, since average farmgate wheat

Table 9 -- Supply and use of grain, NIS/B countries

Marketing year beginning July 1		Area	Production ²	Trade ³		Availability	Utilization			Stock change
				Imports	Exports		F.S.I. ⁴	Feed & residual	Total	
NIS/B region		1,000 hectare	1,000 tons							
Total grains ⁵	1993/94	100,090	179,064	19,719	7,991	190,792	72,159	114,280	186,439	4,353
	1994/95	93,041	142,530	10,636	6,635	146,531	69,022	90,832	159,854	(13,323)
	1995/96	90,843	119,693	11,275	5,745	125,223	66,494	73,392	139,886	(14,663)
	1996/97 ⁶	88,813	119,234	7,875	4,450	122,659	67,684	60,324	128,008	(5,349)
	1997/98 ⁷	86,395	127,107	8,125	6,225	129,007	69,578	57,136	126,714	2,293
Wheat	1993/94	46,344	83,477	13,620	6,500	90,597	48,344	41,041	89,385	1,212
	1994/95	42,599	60,698	7,842	3,952	64,588	46,241	30,493	76,734	(12,146)
	1995/96	45,766	60,282	8,900	4,320	64,862	46,247	27,201	73,448	(8,586)
	1996/97 ⁶	48,701	64,326	6,045	3,450	66,921	47,490	22,896	70,386	(3,465)
	1997/98 ⁷	48,105	69,290	6,390	4,850	70,830	49,465	20,185	69,650	1,180
Coarse grains ⁸	1993/94	53,746	95,587	6,099	1,491	100,195	23,815	73,239	97,054	3,141
	1994/95	50,442	81,832	2,794	2,683	81,943	22,781	60,339	83,120	(1,177)
	1995/96	45,077	59,411	2,375	1,425	60,361	20,247	46,191	66,438	(6,077)
	1996/97 ⁶	40,112	54,908	1,830	1,000	55,738	20,194	37,428	57,622	(1,884)
	1997/98 ⁷	38,290	57,817	1,735	1,375	58,177	20,113	36,951	57,064	1,113
Russia										
Total grains	1993/94	56,788	94,722	8,700	975	102,447	37,700	65,741	103,441	(994)
	1994/95	52,335	77,200	2,709	2,163	77,746	36,722	49,802	86,524	(8,778)
	1995/96	51,121	60,800	5,250	500	65,550	34,092	41,380	75,472	(9,922)
	1996/97 ⁶	50,572	66,700	2,350	1,300	67,750	35,060	33,990	69,050	(1,300)
	1997/98 ⁷	48,500	65,900	2,450	1,150	67,200	35,740	31,160	66,900	300
Ukraine										
Total grains	1993/94	12,499	42,120	425	825	41,720	14,310	22,732	37,042	4,678
	1994/95	11,505	32,383	423	267	32,539	13,831	21,181	35,012	(2,473)
	1995/96	12,376	31,880	35	1,375	30,540	14,370	17,250	31,620	(1,080)
	1996/97 ⁶	12,080	23,000	225	725	22,500	14,520	12,280	26,800	(4,300)
	1997/98 ⁷	12,500	30,800	60	1,525	29,335	15,265	12,385	27,650	1,685
Kazakhstan										
Total grains	1993/94	21,553	21,032	55	6,050	15,037	6,022	9,611	15,633	(596)
	1994/95	20,284	15,912	2	4,074	11,840	5,777	7,101	12,878	(1,038)
	1995/96	18,354	9,246	0	3,525	5,721	5,140	3,354	8,494	(2,773)
	1996/97 ⁶	16,750	10,930	0	2,250	8,680	4,960	3,350	8,310	370
	1997/98 ⁷	16,070	11,620	0	3,000	8,620	5,115	3,195	8,310	310
Belarus										
Total grains	1993/94	2,599	7,291	1,350	100	8,541	2,236	6,162	8,398	143
	1994/95	2,635	6,018	936	25	6,929	2,053	5,034	7,087	(158)
	1995/96	2,508	5,440	720	25	6,135	2,000	4,395	6,395	(260)
	1996/97 ⁶	2,592	5,700	350	25	6,025	2,090	4,035	6,125	(100)
	1997/98 ⁷	2,600	5,750	450	50	6,150	2,115	4,035	6,150	0
Uzbekistan										
Total grains	1993/94	1,095	1,552	3,805	0	5,357	3,665	1,609	5,274	83
	1994/95	1,295	1,972	2,222	0	4,194	3,328	1,245	4,573	(379)
	1995/96	1,610	2,792	1,755	0	4,547	3,527	1,101	4,628	(81)
	1996/97 ⁶	1,935	3,017	1,455	0	4,472	3,601	871	4,472	0
	1997/98 ⁷	1,735	2,807	1,655	0	4,462	3,703	761	4,464	(2)
Moldova										
Total grains	1993/94	833	3,212	300	20	3,492	1,080	1,870	2,950	542
	1994/95	743	1,655	491	40	2,106	896	1,267	2,163	(57)
	1995/96	744	2,489	170	320	2,339	1,020	1,339	2,359	(20)
	1996/97 ⁶	724	1,609	150	50	1,709	960	949	1,909	(200)
	1997/98 ⁷	774	2,429	125	325	2,229	1,015	1,089	2,104	125
Other NIS/B countries										
Total grains	1993/94	4,723	9,135	5,084	21	14,198	7,146	6,555	13,701	497
	1994/95	4,244	7,390	3,853	66	11,177	6,415	5,202	11,617	(440)
	1995/96	4,130	7,046	3,345	0	10,391	6,345	4,573	10,918	(527)
	1996/97 ⁶	4,160	8,278	3,345	100	11,523	6,493	4,849	11,342	181
	1997/98 ⁷	4,216	7,801	3,385	175	11,011	6,625	4,511	11,136	(125)

() = negative value. ¹ NIS and Baltics includes the 12 countries of the former Soviet Union and the three Baltic countries.

² Production is in cleanweight. ³ Includes intra- and extra-NIS/B trade. ⁴ F.S.I. = food, seed and industrial use.

⁵ Wheat and coarse grains only. ⁶ Preliminary. ⁷ Projection. ⁸ Includes barley, corn, millet, oats and rye.

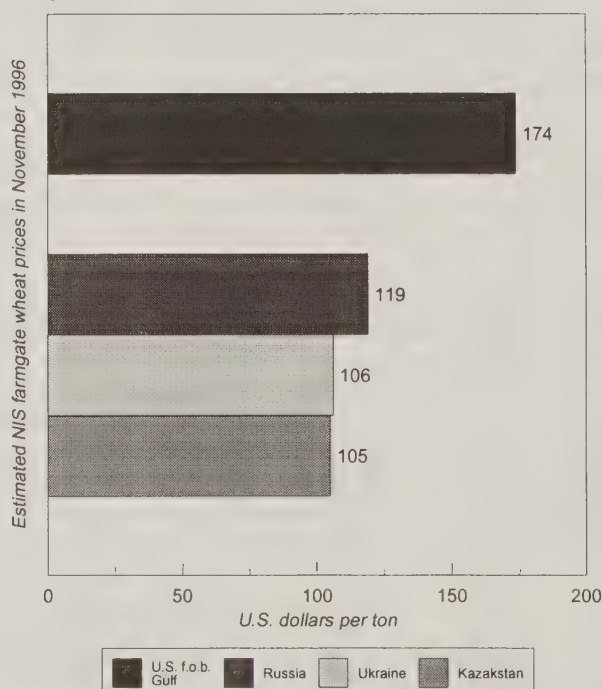
Source: USDA, estimates as of May 1997.

prices in **Russia**, **Ukraine**, and **Kazakhstan** were estimated in late 1996 to be 30-40 percent below the U.S. f.o.b. Gulf price (figure 12). Even with existing infrastructural and policy barriers to exporting grains, NIS feed grains have proven competitive in certain markets in recent years. Another factor is the sharp contraction of state grain purchases allowing emerging private traders to earn higher profits from exporting grain (see annex). These factors are expected to raise NIS grain exports outside the region, though exports are unlikely to total more than 1-2 million tons in 1997/98.

Even though further price liberalization will likely raise internal NIS grain prices closer to world levels, grain exports outside the region have prospects for growth in the long term for several reasons. First, official policies that currently discourage exports, ranging from the **Ukrainian** ban on grain exports following the 1995 and 1996 harvests to **Russian** regional controls on grain movement and the **Kazak** government's grain export registration requirement, are likely to diminish as these countries seek WTO membership and liberalize their trade regimes. Second, investment in improved transport and other infrastructure would make NIS/B grain more competitive on world markets by reducing marketing costs from their current high levels. Third, NIS/B farmers, increasingly responsive to international price signals, are switching production to wheat and other grains that are more heavily traded on the world market, and away from less-traded grains such as oats.

Figure 12

NIS Wheat Prices Lagged Behind U.S. Export Price in Late 1996



Ukraine has the best potential to become a future exporter outside the region, with wheat and corn sales to extra-NIS/B markets possibly reaching 2 million tons annually in the medium to long term. **Kazakhstan** could benefit from strong demand for wheat in countries such as China, Afghanistan, Iran and Iraq. In years of favorable harvests, **Russia** might become a swing supplier of coarse grains such as barley to the Middle East and rye to Central Europe.

A key factor affecting the magnitude of future NIS/B grain exports is likely to be market access. With several Central European countries, including the Baltic nations, likely to become members of the European Union in the coming decade, NIS/B grain exporters may be forced to focus on more distant markets in the Middle East, North Africa, and Asia. Existing transportation networks, concentrated on European markets, would have to be expanded to accommodate exports to markets outside Europe.

Outlook for Grains Generally Improved for 1997

Higher grain prices and slower growth in input costs helped stabilize NIS/B grain output in 1996 after 3 years of steep decline. However, future output recovery is likely to depend on further reform progress, including farm restructuring and privatization of related upstream and downstream sectors. Modestly improved yields likely due to higher fertilizer use, and better overwintering and moisture conditions, could lead to a modest recovery in 1997 NIS/B grain output, after production stabilized at around 125 million tons in 1995 and 1996 (table 10). Total 1997 NIS/B grain production (including pulses, buckwheat, and miscellaneous) was forecast in May 1997 to rise 6 percent to 132 million tons, mainly due to higher **Ukrainian** production after last year's drought-afflicted crop.

In both **Ukraine** and **Russia**, winterkill was significantly below a year earlier, as less severe frosts were accompanied by generally adequate snow cover in key regions. Significantly improved moisture conditions and a 7-percent increase in winter grain sowings could substantially boost **Ukrainian** grain production in 1997. In **Russia**, yield increases supported by higher input use, as a result of lower input costs relative to output (grain) prices, could offset moderate area contraction to keep production near last year's level. While **Kazak** grain yields are likely to rise in 1997 owing to better moisture conditions, further removal of unprofitable lands from cultivation will likely limit growth in grain output.

Price liberalization and opening of markets have led to greater transmission of international prices to domestic NIS/B markets, though the pace of reform has been faster in **Russia** than in **Ukraine** or **Kazakhstan** (figure 13). Following price reforms, faster growth in wheat prices relative to coarse grains has led to an increase in the share of wheat in total NIS/B grain area from 43 percent in 1993/94 to 51 percent in 1996/97, and a forecast 52 percent in 1997/98. In particular, **Russian** wheat and barley area were closely correlated with relative prices (figure 14).

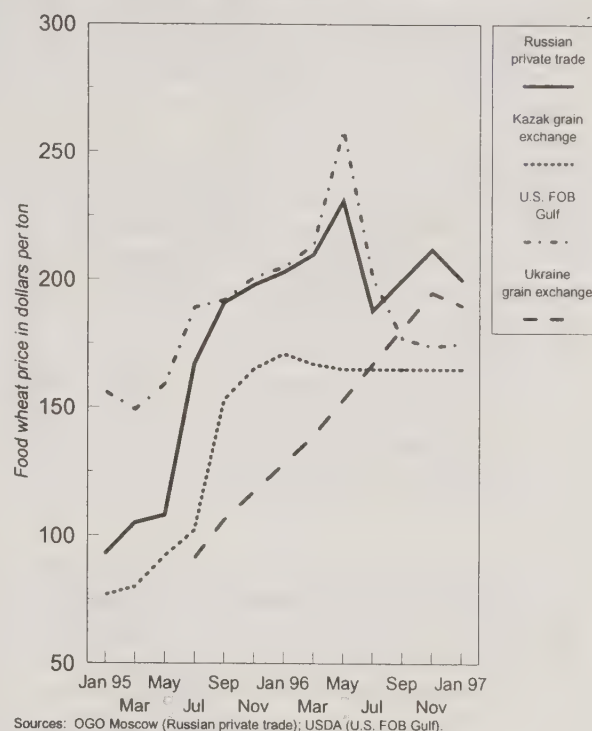
Total NIS/B grain area, which decreased more than 10 percent from 1992 to 1996 as worsening producers' terms of trade made some grain lands unprofitable to cultivate,

**Table 10 --Area, yield, and production of total grain, 1
NIS/B countries**

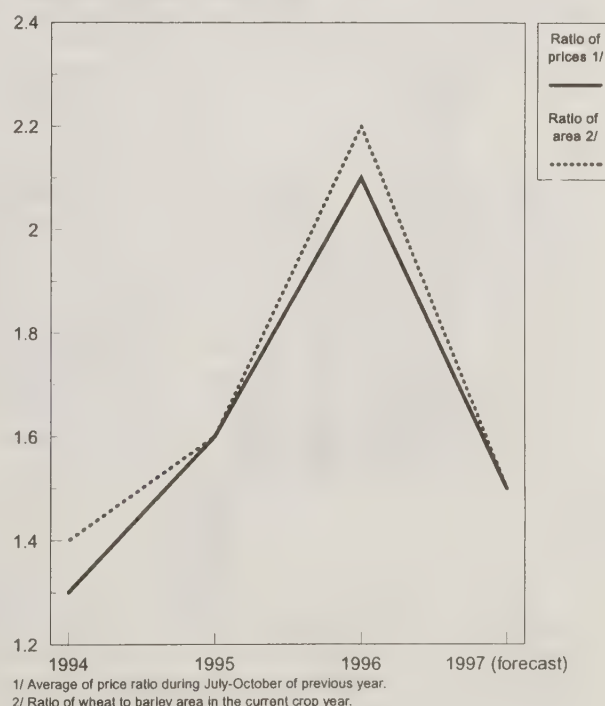
Country	1990	1992	1994	1995	1996 2	1997 3
Area						
	1,000 hectares					
Russia	63,068	61,939	56,280	54,705	53,634	51,550
Ukraine	14,583	13,903	13,244	13,980	13,519	13,950
Belarus	2,630	2,679	2,775	2,748	2,732	2,740
Moldova	746	746	821	827	852	857
Kazakhstan	23,356	22,596	20,849	18,824	17,078	16,375
Uzbekistan	1,017	1,212	1,475	1,790	2,115	1,915
Kyrgyzstan	537	567	598	533	633	658
Tajikistan	224	264	259	259	263	263
Turkmenistan	187	332	598	703	563	563
Armenia	135	181	164	184	181	189
Azerbaijan	582	633	535	595	575	625
Georgia	270	275	264	279	320	366
Lithuania	1,072	1,154	1,219	1,060	1,085	1,000
Latvia	671	703	489	411	443	438
Estonia	396	424	319	309	296	303
Total NIS/B	109518	107608	99889	97207	94289	91792
Yield						
	Tons per hectare					
Russia	1.85	1.72	1.44	1.16	1.29	1.32
Ukraine	3.49	2.77	2.68	2.43	1.81	2.33
Belarus	2.66	2.71	2.20	2.01	2.12	2.14
Moldova	3.40	2.81	2.14	3.14	2.23	2.96
Kazakhstan	1.22	1.32	0.79	0.51	0.66	0.73
Uzbekistan	1.88	1.86	1.66	1.82	1.65	1.71
Kyrgyzstan	2.80	2.67	1.78	1.85	2.23	2.14
Tajikistan	1.31	0.97	1.00	0.98	0.98	0.98
Turkmenistan	2.36	2.22	1.85	1.57	1.38	1.47
Armenia	1.84	1.71	1.80	1.45	1.86	1.78
Azerbaijan	2.34	2.03	1.90	1.83	1.98	1.66
Georgia	2.47	1.83	1.85	1.90	1.76	1.67
Lithuania	3.01	1.92	1.74	1.83	2.39	2.17
Latvia	2.36	1.64	1.84	1.69	2.14	2.02
Estonia	2.41	1.41	1.61	1.68	1.99	1.91
Total NIS/B	1.99	1.82	1.51	1.29	1.32	1.44
Production (cleanweight)						
	1,000 tons					
Russia	116,676	106,855	81,300	63,400	69,285	68,200
Ukraine	51,009	38,537	35,497	33,930	24,452	32,500
Belarus	7,037	7,253	6,093	5,510	5,800	5,850
Moldova	2,539	2,099	1,760	2,597	1,899	2,537
Kazakhstan	28,487	29,772	16,384	9,623	11,297	11,900
Uzbekistan	1,899	2,257	2,445	3,264	3,489	3,279
Kyrgyzstan	1,570	1,516	1,062	984	1,409	1,409
Tajikistan	303	257	258	253	258	258
Turkmenistan	450	737	1,105	1,106	778	828
Armenia	255	310	241	266	336	336
Azerbaijan	1,364	1,285	1,016	1,086	1,136	1,036
Georgia	667	503	489	530	562	612
Lithuania	3,268	2,215	2,127	1,935	2,590	2,170
Latvia	1,622	1,152	900	695	950	883
Estonia	957	599	514	520	590	580
Total NIS/B	218026	195347	151191	125699	124831	132378

1 Official total grain data as reported by the NIS/B countries. Includes wheat, barley, rye, corn, oats, millet, buckwheat, unmilled rice, and pulses. 2 Preliminary. 3 Projected.
Sources: Goskomstat; Statkom SNG.

**Figure 13
NIS Markets Become More Responsive
To World Price Trends**



**Figure 14
Relative Wheat and Barley Prices
Affect Area Sown In Russia**
Ratio of food wheat to feed barley



could contract further in 1997 as additional unprofitable lands are removed from grains in **Russia** and **Kazakhstan**. In Russia, more land might be taken out of production in the North, Central, Far East, and Siberian regions because grain farming is less profitable there (figure 15). NIS/B grain area is likely to stabilize in the near term at slightly below current levels, as grain use stops contracting.

Although increased input use should raise NIS/B grain yields in coming years, any significant increase will likely depend on further structural reform of the grain sector. Key among these reforms will be the degree to which existing farms are privatized and restructured, since the continued dominance of collective farming in most NIS/B countries (excluding the **Baltic** and **Caucasus** nations) maintains inflexible management structures. Inflexible management fails to take advantage of opportunities to reduce costs and increase productivity through better seeds, improved cultivation techniques, new crop technologies, and other innovations.

Also important is upgrading the physical infrastructure, which currently "taxes" farmers through means such as high transport costs, and creating necessary financial institutions, the absence of which denies farmers vital services such as seasonal financing for buying fertilizer and crop insurance. Finally, further privatization of both the upstream and downstream sectors is necessary if farmers are to realize their full potential as grain producers. Progress to date has involved mainly the downstream sector, where the rapid growth of small, private mills and bakeries has cre-

ated competition for large, formerly state-owned enterprises, though upstream entities are increasingly being sold to private owners.

Grain Demand To Remain Low

The low competitiveness of NIS/B livestock products and continued decline in meat consumption have weakened grain demand through downsizing of livestock inventories, typically the largest user of grain. Total 1997/98 grain consumption in the NIS/B region was forecast (in May 1997) to fall slightly, to 127 million tons, following nearly a 10-percent drop the previous year. Most of the decline will likely be in feed use, projected to decline to 57 million tons, while food, seed, and industrial use should stabilize or increase slightly. Demand for grain used as feed has been halved over the past 5 years as falling incomes have led to sharply lower demand for meat and other livestock products, higher prices have reduced waste, and cheaper non-grain feeds such as forage crops have been substituted for grain. Growing animal product imports, especially of meat into **Russia**, have further depressed demand for feed grains in recent years as countries such as the United States benefit from the inefficiency of the region's livestock sector.

Food grain demand has remained fairly steady as higher per capita bread consumption, stimulated by falling average incomes, was roughly offset by reduced bread waste. While official data for some countries indicate a large increase in food grain use over the past 3-4 years, alternative household survey consumption data suggest a less dramatic rise, keeping annual regional demand at around 40 million tons annually.

OUTLOOK FOR OTHER CROPS

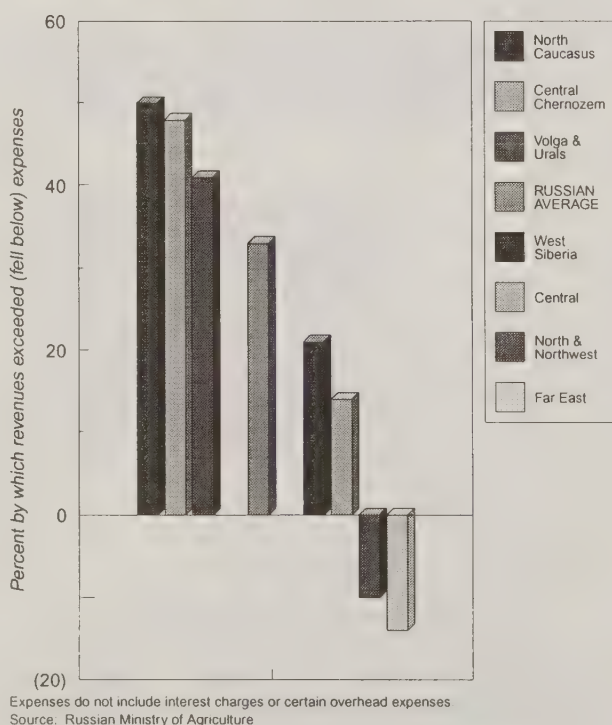
Sunflowerseed Production Responded Early To Liberalization; Now Stabilizes

Already producing the most profitable field crop before reform, the **Russian** sunflowerseed sector responded quickly to removal of export quotas in 1994 (table 11). As prices approached world levels, Russian sunflowerseed exports nearly doubled from 1992/93 to 1994/95. By 1995 production reached a near-record 4.2 million tons. Now the period of rapid growth may be over. Exports for 1996/97 will decline to an estimated 1 million tons from 1.2 million last year. This is still a high forecast given the one-third smaller 1996 crop. Export destinations remain Western Europe, Turkey, and the Middle East. Even though world prices have fallen, the need to repay private creditors will help maintain exports this season and beyond. The entry of private capital into the oilseeds sector is one of the results of reform. Over the last two seasons, sunflowerseed production, especially in Russia, has been financed, at least partly, by both foreign and domestic private interests that have contracted for a portion of the crop before planting. The sharp rises in sunflowerseed exports in recent years are largely over because production is expected to stabilize.

While the **Russian** government's 1997 production target for sunflowerseed is 4.3 million tons, meeting this target will require yields near 1995's highs and greater planted

Figure 15

Grain Profitability Varied Among Russian Regions in 1996



area. A slightly smaller crop seems more likely for the following reasons. While yields could easily recover from 1996's drought-reduced lows, they are unlikely to reach 1995 highs, which were due in part to good weather. Plantings declined in 1996 after rising strongly in 1994 and 1995. The reason area rose initially was that sunflowerseed profitability soared both absolutely and relative to grain in those years (figure 16). By 1996, sunflowerseed profitabil-

Table 11--Production costs, producer prices, export unit prices, and profitability of selected crops, Russia

	1990	1991	1992	1993	1994	1995	1996 ¹
Production cost²							
	<i>Dollars/ton³</i>						
Grain	6	4	9	17	35	64	97
Sunflowerseed	8	4	14	27	58	87	125
Sugarbeets	2	1	5	10	21	25	38
Potatoes	13	7	14	30	75	114	164
Vegetables	9	6	18	47	87	139	199
Producer prices⁴							
	<i>Dollars/ton</i>						
Grain	15	7	39	48	53	77	123
Sunflowerseed	20	15	77	78	123	202	164
Sugarbeets	4	1	10	22	27	38	39
Potatoes	16	16	38	60	119	197	193
Vegetables	13	16	41	117	172	186	224
Producer prices⁵							
	<i>Dollars/ton</i>						
Grain	15	7	38	47	44	73	129
Sunflowerseed	20	15	75	77	123	201	164
Sugarbeets	4	1	10	21	25	37	41
Potatoes	16	16	36	59	112	187	206
Vegetables	13	16	39	116	168	183	232
Export unit prices⁶							
	<i>Dollars/ton</i>						
Grain	--	--	--	--	87	136	185
Sunflowerseed	--	--	--	--	202	232	--
Potatoes	--	--	--	--	128	237	--
Profitability⁷							
	<i>Percent</i>						
Grain	158	104	304	190	59	55	39
Sunflowerseed	145	231	381	217	145	134	45
Sugarbeets	26	-2	95	109	42	39	10
Potatoes	24	120	150	102	77	83	25
Vegetables	42	97	99	118	74	41	4
Ruble-dollar exchange rate							
	19	59	223	934	2,202	4,562	5,126

¹ Preliminary.

² Prime cost of production (sebestoimost') in the state sector.

³ Production costs and producer prices were converted from rubles to dollars using the exchange rates given in this table.

Export prices are reported in dollars per ton by Goskomstat.

⁴ Producer prices(vyruchka) with subsidies.

⁵ Producer prices(vyruchka) without subsidies.

⁶ Total export value divided by export volume.

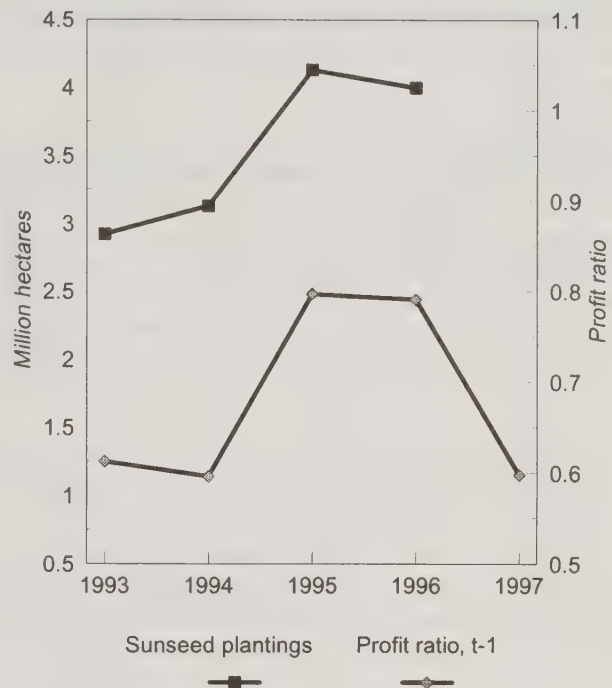
⁷ Profitability (rentabilnost') including state subsidies.

-- = Not available.

Source: Goskomstat Rossii.

Figure 16

Sunseed Area Responds to Relative Prices, Russia



Note: Profit ratio is calculated.

Sources: Goskomstat Rossii.

ity fell both absolutely and relative to grain. This change helped shift producer interest to grain in 1996 and 1997, especially after 1996's severe weather and a drop in international sunflowerseed prices. These same price fundamentals also apply in **Ukraine** where, as in Russia, sunflowerseed production is a major hard currency earner. Because pricing fundamentals are now affecting production, import, and export decisions in NIS/B countries, world oilseed prices are more likely to be affected by supply and demand in the region.

A factor contributing to planting decisions in the recent past is that high profits for sunflowerseeds had prompted producers to plant successive crops more frequently than good rotational practice recommends. Higher profits in the grain sector, could encourage a return to better rotational practices and would limit expansion in sunflower area by reducing successively planted sunflowerseed crops. In the longer term, projections are for sunflowerseed planted area in both **Russia** and **Ukraine** to hold near current levels, but yields could climb slightly as outside financing provides working capital to purchase hybrid seed, chemicals, and fertilizer.

Higher real domestic prices for vegetable oil in **Russia** and **Ukraine** both this season and last are limiting consumption growth and consequently vegetable oil imports. Russia's 1996/97 sunflowerseed oil imports were projected (in May 1997) at 100,000 tons, down from 1995/96's 277,000-ton peak, the highest since 1989/90. Another factor restraining imports is the quantities of sunflowerseed not being crushed but listed as "other use" (see annex). Much of this

represents payment-in-kind for wages or other goods and services. Sunflowerseeds entering this channel are in all likelihood crushed privately and the products sold in the private and informal markets that have arisen since reform began. These markets are likely satisfying an increasing proportion of domestic demand and competing with imported oil.

That **Russia** is an exporter of sunflowerseeds and an importer of sunflowerseed oil implies that the country is an importer of processor services. The nominally privatized state sector is still beset with overstaffing and high overhead costs, making it uncompetitive with either the informal private domestic market or foreign processors. The pace of development in the private processing sector will determine NIS/B sunflowerseed exports and vegetable oil imports over the longer run.

Sugarbeet Profits Trail Those of Other Crops

Russia and **Ukraine** together account for 90 percent of NIS/B sugar production and more than 75 percent of NIS/B sugar consumption (see annex). Russia has traditionally been an importer of both raw and refined sugar and Ukraine an exporter. Since 1991/92, the last year before reform, Russia's total sugar imports have declined from 3.9 million tons to a projected 3.0 million in 1997/98, which still represents 60 percent of total consumption. While these changes would seem modest in light of the dramatic changes observed in Russian consumption of other foodstuffs, there have been substantial changes in NIS/B sugar trade. Both consumption and production have declined in both countries since reform. Russia now imports more raw sugar from Cuba and elsewhere and refines it domestically. Before reform, Russian refined imports came almost exclusively from other Soviet republics, mostly Ukraine. Since reform, a rising proportion of refined imports come from extra-NIS sources, mainly Brazil and Western Europe.

It is becoming apparent that per capita consumption of sugar in Russia and Ukraine has stabilized at a new lower post-reform level. The 1997/98 sugar consumption projections for **Russia** and **Ukraine** are 5 million and 2.1 million tons, respectively, both down nearly 1 million tons from 1991/92, but virtually unchanged from last year. Total NIS/B sugar consumption for 1997/98 is projected at 9.5 million tons, down from 12.6 million in pre-reform 1991/92. While higher real prices and falling real incomes contributed to previous drops, changes in consumer behavior have also made it unlikely that consumption will ever return to pre-reform levels, despite expected modest rises in income. Less home production of alcoholic beverages and hoarding, and increased imports of confections, have been the basis of change. Longer term forecasts suggest that consumption in **Russia** and **Ukraine** could rise 8 to 10 percent by 2005.

Domestically, the industries in both **Russia** and **Ukraine** continue to be hampered by the decline in consumption and by poor profitability. Because of production and consumption declines, the sugar producing sectors of both countries have excess refining capacity. Short production

runs boost already high per unit costs. Russian policy has been to increase imports of raw sugar, mostly from Cuba, to keep plants running. Ukraine also imported raw sugar, and exported the refined sugar to Russia, depressing prices there. Russia has responded with a planned but as yet unimplemented quota of 1 million tons on Ukrainian refined and 1.5 million tons on total refined imports. In mid-May 1997, Russia extended its 25-percent customs tariff on white sugar to all countries outside its regional Customs Union. Ukraine, not a member of the Customs Union, was particularly affected by this new policy. The practice of exporting the excess refining capacity to one's trade partners impedes reform in the processing industries of both countries by delaying the closing of refining capacity that must ultimately occur before the industry can recover.

The **Russian** and **Ukrainian** governments' efforts to subsidize their refining industries by importing low priced raw sugar depress farmgate prices for sugarbeets. Consequently, sugarbeets remain among the least profitable of major field crops (table 11). Unless sugarbeet production becomes more profitable, the crop will loose ground to more lucrative crops such as grains and sunflowerseeds, and the domestic industry will rely even more on refining imported raw sugar.

Cotton Production Flat Despite Strong Global Demand

Uzbek cotton exports have been near 1 million tons in recent years and are projected at 930,000 tons for 1996/97, a 17-percent drop from pre-reform 1991 (see annex). Uzbekistan exports are second only to the United States and in recent years have been about 15 percent of world trade. Stagnant production, a result of government policy, is forecast to keep Uzbek exports near current levels in coming years. **Russia**, the second largest market for Uzbek cotton after Italy last year, is projected to import 200,000 tons for 1996/97. With gradual recovery in the Russian textile industry, imports could rise over the next few years. Given increasing Russian demand and without market liberalization in the Central Asian republics, an increasing share of Russian cotton imports could come from extra-NIS/B sources.

Because **Uzbekistan** accounts for 70 percent of NIS/B cotton production and is among the least reformed of the NIS/B states, the outlook is for little change in cotton production. Over the next few years, cotton area will likely change little from 1997 because Uzbekistan has embarked on a program of grain self-sufficiency, which plans to limit cotton area to 1.5 million hectares a year. Production increases are expected to come from rising yields with government-subsidized inputs. In the long term, the net effect of subsidized inputs on production is not likely to be significant.

It is unlikely that **Uzbekistan** will be able to maintain its grain self-sufficiency policy indefinitely because expanding grain production in neighboring NIS/B countries will make holding land in grain production increasingly inefficient. With reform, cotton area could expand, but yield increases could be limited because of the scarcity and corresponding costliness of irrigation water.

Agricultural Trade Outlook to 2005

According to USDA forecasts, the NIS/B region will in the long run remain a major importer of meat, but will be only a small net importer of grain. By the middle of the next decade, NIS/B net imports of meat (from outside the region) are forecast to be about 2 million tons, while net imports of grain are projected at only around 2.5 million tons. About half of the projected net meat imports will be poultry, and most of the net grain imports wheat. The region could become a small net exporter of coarse grains. **Russia** alone should account for almost all of the net meat imports (about half again being poultry), and also for the bulk of extra-NIS/B grain imports.

The projections are from an ERS model of the world agricultural economy, the Country-Link System, which generates forecasts for agricultural production, consumption, and trade. The Country-Link System consists of 46 individual country or regional models, all of which are partial equilibrium and dynamic in nature, covering 22 commodities.

The main assumptions behind the long term NIS/B forecasts are: (1) after a couple more years of either decline or no growth, real GDP in **Russia** and the other main NIS/B countries begins to grow, at about 3 percent annually during 2000-2005; (2) productivity growth in the livestock sector is slight; (3) area for most grains either remains unchanged or falls somewhat more; (4) yields in the grain sector generally rebound, though by 2005 to only pre-reform levels (crop yields are determined partly by assumption, and partly by relationships within the model); and (5) commodity-specific trade policies remain unchanged, which means import tariffs continue at their current levels, and no import quotas are established. The main reason for the pessimistic view of productivity growth, particularly in livestock operations, is that institutional reform in agriculture has barely begun, and evidence does not suggest that major reform will soon be attempted. Yet, institutional reform (involving such matters as land reform and privatization) is needed to improve producers' incentives to use inputs more productively. One reason yields for certain grains are assumed to increase is that area for these crops is expected to continue to fall, and the land taken out of production is the least productive. The retiring of marginal land should increase average yield for the superior land that remains in use.

Tables 12 and 13 present USDA's forecasts for production and trade of meat and grain in the NIS/B region in the aggregate, and also for **Russia**. The forecasts for meat are for calendar 2005, and for grain, marketing year 2005/2006 (July/June). The base year from which the model generates forecasts is calendar 1998 (for crops, marketing year 1997/98). The figures given for 1998 are therefore estimates (not generated by the model) for production and trade in that year.

The assumed rise in real GDP in the NIS/B region over the projection period increases consumer demand, and therefore consumption, for meat (as indicated in the tables

Table 12 --Production and trade for meat and grain, NIS/B

	1987-91	1995	1996	1997	2005
				(base year)	
	1,000 tons				
Meat ¹					
Production ²	19,446	11,181	10,318	9,502	11,378
Net imports ³	853	1,737	2,006	2,225	2,122
Poultry					
Production	3,219	1,348	1,221	1,215	1,502
Net imports	136	915	1,040	1,105	1,172
Grain					
Production ⁴	178,278	142,537	119,482	140,270	160,107
Net imports ³	34,862	3,846	5,740	3,570	2,587
Wheat					
Production	83,442	60,710	59,795	73,500	85,470
Net imports	17,533	3,735	4,790	3,000	2,658
Coarse grain ⁵					
Production	94,836	81,827	59,687	66,770	74,637
Net imports	17,329	111	950	570	(71)

Note: For grains, year is marketing year (July of given year to June of following year). Figures for 1987-91 are average annual values.

Parentheses for net imports mean net exports.

¹ Includes beef, pork, poultry, mutton, and goat.

² Carcass weight.

³ From countries outside of NIS/B region.

⁴ Cleanweight.

⁵ Includes barley, corn, millet, oats, and rye.

Source: For both historical and projection figures, USDA.

by summing production and net imports in 2005). The anticipated modest increase in productivity in the livestock sector helps stimulate production to satisfy most of the increased demand. However, without substantial productivity growth, the NIS/B's comparative disadvantage in meat (resulting from high costs of primary production, processing, and marketing) continues. Net imports remain at about 2 million tons. Poultry's dominant position in meat imports persists, and **Russia** continues to account for almost all of the region's net meat inflows.

Grain consumption is stimulated mainly by rising demand for feed grain resulting from modest growth in the livestock sector. Increasing grain yields raise projected production sufficiently that all of the expanded demand for grain is met by rising output within the NIS/B region. This is indicated by the fact that NIS/B net imports of grain fall slightly over the projection period, to about 2.6 million tons. The region is forecast neither to return to the large grain imports of the pre-reform period, nor to become a major grain exporter (as some Western observers predicted at the beginning of reform). Net grain imports continue to be primarily wheat. The region (and **Russia** even more so) could become a small net exporter of coarse grains.

Table 13 --Production and trade for meat and grain, Russia

	1987-91	1995	1996	1997 (base year)	2005
	1,000 tons				
Meat ¹					
Production ²	9,763	5,719	5,203	4,791	5,640
Net imports	1,408	1,943	2,146	2,125	2,185
Poultry					
Production	1,774	859	765	750	913
Net imports	100	865	945	980	1,046
Grain					
Production ³	94,780	77,200	60,800	74,000	84,248
Net imports	21,266	206	4,650	2,750	1,796
Wheat					
Production	41,846	32,100	30,100	37,500	43,431
Net imports	10,736	1,175	4,000	2,600	2,426
Coarse grain ⁴					
Production	52,933	45,100	30,700	36,500	40,817
Net imports	10,530	(969)	650	150	(630)

Note: For grains, year is marketing year (July of given year to June of following year). Figures for 1987-91 are average annual values, except for meat and poultry meat imports, which are for 1991.

Parentheses for net imports mean net exports.

¹ Includes beef, pork, poultry, mutton, and goat.

² Carcass weight.

³ Cleanweight.

⁴ Includes barley, corn, millet, oats, and rye.

Source: For both historical and projection figures, USDA.

The forecast changes in NIS/B agricultural production, consumption, and trade over the projection period are much less dramatic than those that have occurred from the beginning of reform to the present. The main reason for the restructuring of NIS/B agricultural production and trade has been major reform-induced changes in real prices (of both inputs and output) and consumer incomes. The policy changes responsible for altering real prices and incomes have been price liberalization, economy-wide reduction or elimination of subsidies to both producers and consumers, and integration of the domestic economy into the world economy. Price liberalization fundamentally changed prices

by having them move to reflect real costs of production, while integration into the world economy (with only modest trade controls) caused prices moving toward world market levels. Price liberalization also severely reduced consumers' real incomes, as prices rose by a greater percentage than wages and salaries. Since consumers' and producers' market decisions on buying and selling depend mainly on prices and incomes, major changes in these economic variables will substantially change the structure of any economy's production and trade.

In most NIS/B countries, price and trade liberalization began sufficiently long ago (the early 1990s) that the major adjustments in real prices and incomes have had enough time to play out, and are now ending. Evidence is that consumer incomes in **Russia** and most other NIS/B nations have generally stopped falling, and in some countries are rising modestly. The extreme deterioration in agricultural producers' terms of trade has also stopped, and at least for some producers the terms will probably soon improve.

As reflected in the ERS modeling study, future changes in agricultural production and trade within the region will most likely have to come from two main developments: (1) changes in consumer demand resulting from growing real incomes; and (2) productivity growth, which would increase output, lower production and distribution costs, and thereby improve the competitiveness of domestic output vis-a-vis the world market. By 2000 the major NIS/B economies should be growing in real terms, thereby increasing consumer purchasing power. Whether the rise in consumer demand for foodstuffs is satisfied mainly by expansion of domestic production or of imports will depend largely on the pace of cost-reducing productivity growth within NIS/B agriculture. If costs do not fall and improve price competitiveness, not only in primary production but also in processing and distribution, most of the growth in consumer demand will be satisfied by rising imports. The key to productivity growth is institutional reform in agriculture, the prospects for which do not look promising over the projection period. Without such reform, the NIS/B region likely will remain a major importer of meat, and a small net importer of grain. [William M. Liefert and David J. Sedik]

References

USDA, ERS, *International Agricultural Baseline Projections to 2005*, forthcoming in 1997.

Agricultural Issues Figure Prominently in Russia's WTO Accession

As negotiations for Russia's accession to the World Trade Organization (WTO) progress, discussion on agriculture will focus on market access, export subsidies, and internal support. Compliance with WTO regulations should limit Russia's ability to increase trade barriers and use trade-distorting internal support to protect its farm sector, thus bolstering market reform. Moreover, WTO membership will likely benefit Russia (and its trading partners) by requiring conformity with international trade law, increasing Russia's attractiveness for foreign investment, and providing most-favored nation treatment and access to trade dispute mechanisms. [Sharon S. Sheffield and William M. Liefert]

As part of the process of WTO accession, member countries will scrutinize Russia's agricultural trade and internal support policies for conformity with the organization's regulations. Although the specific modalities (such as base periods and specific reduction commitments) of the Uruguay Round negotiations do not apply to acceding countries, the spirit of trade liberalization and reduction of trade-distorting support embodied in the Uruguay Round Agreement on Agriculture and other related agreements will set the tone for the accession negotiations.

Tariffs are Russia's primary means of restricting agricultural imports. However, WTO accession negotiations will also focus on less transparent types of protection, such as state trading, sanitary and phytosanitary (SPS) measures, or technical barriers to trade (TBTs) (table 14). Important issues for state trading are how former foreign trade organizations and procurement agencies operate, and to what degree concessional credit and other privileges are provided to Russian organizations and regions. Russia's evolving standards and certification systems will also be closely monitored to ensure consistency with WTO rules on SPS and TBTs.

Measuring Russian internal support to agriculture involves special challenges. The two most serious areas are adjusting yearly values because of the high inflation that existed during the first half of the 1990s in order to have constant year values, and adjusting for the rapid change in the real exchange rate of the ruble vis-a-vis the U.S. dollar (as well as other Western convertible currencies).

Two other issues tied closely to Russia's economic transformation that are relevant to WTO accession are (1) regional controls on agricultural flows and (2) trade agreements with other NIS countries. Many regional governments (oblasts) have restricted agricultural outflows, largely through their continued power of procurement, and some oblasts are also now turning to import constraints. The controls create the problem that Russia lacks a country-wide uniform trade regime. Much of Russia's NIS agricultural trade is conducted through inter-state trade agreements that specify trade volumes, raising questions of state trading and trade discrimination.

Despite Attempts, No Quantitative Restrictions On Food Imports Have Been Created to Date

Russia currently has relatively moderate import tariffs (5-30 percent) on most agricultural products (although tariffs on alcoholic beverages are higher). However, for certain sensitive products, such as meat, dairy, fruits, vegetable oil, and other processed foods, minimum per unit tariffs were introduced last year in addition to the existing *ad valorem* rate. (The tariff is expressed as an *ad valorem* tariff, "or no less than" a certain per unit tariff in European Currency Units per kilogram.) For some of these products, the per unit tariff appears to increase the effective *ad valorem* rate, which may not be consistent with WTO rules (table 15). At the very least, mixed tariffs of this type are not entirely transparent, and can result in different effective tariff rates, depending on the import price.

The tariff on poultry meat imports is a good example of how the effective *ad valorem* rate differs depending on the import price. In 1996, the average c.i.f. import price for poultry meat, according to Russian customs committee data, was \$659 per ton. However, the average f.o.b. export price of U.S. poultry meat (which makes up over 80 percent of total Russian imports) was around \$900 per ton. If an average import price based on the U.S. export price (plus transportation costs) of \$1,100 is used, the effective tariff rate is closer to the *ad valorem* rate of 30 percent.

For imports of food and agricultural products, Russia has so far not officially used quantitative restrictions. The Law on State Regulation of Trade, passed in 1995, provides for the introduction of quantitative trade restrictions on imports, and a 1996 presidential decree also recommended the use of quantitative restrictions to stem the flow of agricultural imports and protect domestic producers.

In 1996, attempts were made to introduce import quotas on two types of products: ethyl alcohol and vodka, and sugar. Although the efforts have so far failed, nonautomatic licensing was established for imports of ethyl alcohol and sugar. The WTO does not allow members to use quantitative restrictions on agricultural products as a barrier to trade. Also, although the Uruguay Round Agreement on Safeguards contains provisions allowing quantitative restrictions in cases where import levels cause serious

Table 14 -- Russia's Accession to the WTO: The Main Issues for Agriculture

Policy Area	Issues
Market Access	
1. Minimum per unit tariffs	In 1996, minimum per unit tariffs were introduced in addition to established ad valorem rates ("x% or no less than y ECU/kg"). Conversion of per unit tariffs indicates most are near ad valorem rate, with exception of sausage, ethyl alcohol, and chewing gum. ¹
2. Import Licensing	In 1997, nonautomatic licenses were introduced for imports of ethyl alcohol and vodka. In addition, an advance deposit on customs charges must be made to receive a license.
3. State trading	The status of former foreign trade organizations (FTOs) is unclear, as well as connection to gov't ministries. Concessional credit tied to import source, product, and quantity has been provided to the city of Moscow. Numerous trade concessions have been made available to Russian organizations and regions.
4. Customs valuation	In Jan. 1996, minimum per unit values for customs valuation were introduced for several agricultural products.
5. SPS Measures/ TBTs	Imports of certain livestock products are banned due to sanitary provisions, foreign processing plants require certification, labeling requirements are being strengthened to counter "low quality" imports.
6. Oblast trade policies	Weak central control has led to increased policymaking at the oblast level. In 1996, Sverdlovsk Oblast introduced a 50-percent tariff on poultry meat imports.
7. CIS Trade Arrangements (FTAs, Customs Unions)	Most trade with CIS countries is conducted on a noncommercial, concessional basis. Imports from CIS countries are exempt from import tariffs. Possible use of STEs to conduct trade.
Export subsidies	
1. Transportation subsidies	In 1994, Russia made a 50-percent transportation subsidy available for exports of certain grains, although it was not used. No subsequent export subsidies have been announced.
Internal Support	
1. Calculating the AMS for a country undergoing economic change	Technical problems include: high inflation rates, significant undervaluation of the ruble, negative price gaps, capturing support at the regional level, data reliability.
2. Policy classification	Many policies are a hybrid of centrally-planned and market economics. Difficult to evaluate them in context of member countries' policies used to develop internal support classification system.

¹The minimum per unit tariff for poultry meat was also higher than the stated ad valorem rate when the per unit c.i.f. price implied by Russian customs data is used. However, this per unit price appears too low compared to U.S. export data.

Table 15--Effective ad valorem tariff rates, Russia

HS code	Product	Ad valorem	Specific tariff	Avg. import price (c.i.f.)	HS code used for price	Effective ad valorem rate ¹	Estimated US market share ²
		Percent	ECU/kg	\$/ton ³	\$/ton		
02.02.10	Beef, frozen, carcass	15	0.15	180.00	1,507	02.02	2
02.02.20	Beef, frozen, other cuts	15	0.15	180.00	1,507	02.02	2
02.02.30	Beef, frozen, boneless	15	0.20	240.00	1,507	02.02	2
02.03.21	Pork, frozen, carc.	15	0.20	240.00	1,404	02.03	5
02.03.22	Pork, frozen, ham, shoulder	15	0.20	240.00	1,404	02.03	5
02.03.29	Other pork, frozen	15	0.25	300.00	1,404	02.03	5
02.07.00	Poultry meat ⁴	30	0.30	360.00	659	02.07	82
04.05.00	Butter and other milk fats	20	0.30	360.00	1,952	04.05	12
06.03.10	Fresh cut flowers (6/1-10/31)	25	0.08 ⁵	0.10 ⁵	na	na	na
08.03.00	Bananas	5	0.02	24.00	519	08.03	0
08.05.10	Oranges	5	0.02	24.00	493	08.05.10	1
08.05.20	Mandarins	5	0.03	36.00	634	08.05.20	0
08.05.30	Lemons and limes	5	0.02	24.00	593	08.05.30	2
08.50.40	Grapefruit	5	0.02	24.00	na	na	na
08.08.10	Apples	na	0.20	240.00	565	08.08	5
except:	Fresh apples, 1/1-7/31	na	0.10	120.00	565	08.08	5
09.01.22,							
09.02.10	Tea	10	0.10	120.00	1,976	09.02	0
15.12.11.91,							
15.12.19.91	Sunflower oil	15	0.09	108.00	843	15.12	0
15.17.10	Margarine (not incl. liquid)	15	0.12	144.00	932	15.17.10	3
16.01.00	Sausage	20	0.40	480.00	1,547	16.01	35
16.02.00	Sausage (excl. 16.02.10)	15	0.40	480.00	1,644	16.02	6
17.01.99.10	White sugar	25	0.07	84.00	472	17.01.99.10	0
17.04.10	Chewing gum	25	1.50	1,800.00	2,185	17.04.10	1
18.06.31	Other food prods w/ cocoa	na	0.60	720.00	1,833	18.06	3
20.09.00	Fruit juices (per liter)	15	0.07	84.00	na	na	1
21.01.10.110	Extracts--coffee-based	10	0.50	600.00	6,455	21.01.10	0
21.06.90.99	Sugarless gum	25	1.50	1,800.00	na	na	na
22.02.10	Waters, mineral/carb. (per liter)	25	0.06	72.00	na	na	na
22.02.90	Other nonalc. bev. (per liter)	15	0.07	84.00	na	na	na
22.03.00	Beer (per liter)	na	0.60	0.72	1	22.03	6
22.04.10	Sparkling wine (per liter)	na	1.32	1.58	1	22.04	0
22.04.21.100,							
.210, .230	Other sparkling wine (per liter)	na	0.50	0.60	1	22.04	0
22.04.29	Other wine (per liter)	na	0.12	0.14	1	22.04	0
22.05.10	Vermouth (per liter)	na	0.50	0.60	2	22.05	0
22.05.90			0.12	0.14	na	na	
22.06.00	Other fermented wine (per liter)	na	0.50	0.60	1	22.06	1
except:							
22.06.00.910	Sparkling fermented wine (per liter)		1.32	1.58	na	na	
22.07.00	Ethyl alcohol (80% or higher, lit	100	2.00	2.40	1	22.07	0
22.08.00	Ethyl alcohol (less than 80%, liter)		2.00	2.40	4	22.08	4
except:							
22.08.910	Vodka	na	4.00	4.80	4	22.08.90.310	7
22.08.990			4.00	4.80	4	22.08.90.310	7
23.09.10	Pet food	25	0.20	240.00	1,128	23.09.10	2

na=Not available or not applicable.

Sources: Government resolution no. 413, Tamozhennii komitet, ERS estimates.

Bold denotes per unit tariff in ad valorem equivalent higher than the stated ad valorem rate.¹ Ad valorem equivalent of the minimum specific tariff.² Based on Russian customs data only (value), does not use U.S. trade data.³ Exchange rate of \$1=1.2 ECU used.⁴ Some tariff lines under 02.07 are not subject to this tariff.⁵ Each.

injury (or the threat thereof) to domestic producers, specific criteria must be met to justify a safeguard measure.

Less Transparent Trade Barriers Could Grow

When Russia joins the WTO, it will have to bind its import tariff rates at a negotiated level, and agree not to introduce quantitative restrictions or other nontariff barriers. Given these policy constraints, it is possible that Russia may turn to less transparent means to regulate trade. One possible way, which raises questions of state trading, is through the government's influence over foreign trade operations. Most of the state agencies that handled the USSR's foreign trade under central planning have been converted to joint-stock companies, in which the government continues to hold (sometimes majority) shares. Moreover, the government has granted tax exemptions, exclusive buying/selling rights, and concessional credit tied to specification of import sources to certain organizations, which may influence the direction or level of trade.

The concessions and privileges granted to these organizations have probably increased, rather than decreased, Russian imports of foodstuffs. However, as the array of policy instruments to protect domestic producers declines, the relationship between the state and these organizations, as well as other state trading type of activity, could be used as an indirect way to reduce imports (or subsidize exports).

Sanitary and phytosanitary (SPS) issues and technical barriers to trade (TBTs) are other areas of concern, in large part due to the transitional nature of Russian laws and institutes that regulate these issues. SPS measures include all policies protecting animal, plant, or human health or life, while TBTs include technical regulations and standards. In February 1996, Russia raised several issues concerning sanitary requirements for U.S. poultry meat in an attempt to restrict imports. Also in 1996, Russia banned the import of certain livestock products (ground beef and pork, mechanically deboned beef, ground meat hamburger patties, uncooked partially processed meats, and table eggs), in large part due to concerns over the outbreak of BSE ("mad cow disease") in Europe.

A new labeling requirement for imported food products, which was scheduled to go into effect in May, could constitute a technical barrier to trade due to inadequate instruction on how it will be enforced. According to the new regulations, all food products imported into Russia must contain information (in Russian) on the label concerning the product type, manufacturer, country origin, weight, main ingredients, nutritional value, use instructions, shelf life, and storage conditions. The government resolution introducing these regulations did not indicate how they would be enforced, nor did it include a definitive list of products subject to the requirement. It is also unclear whether Russian products will be held to the same standard in terms of the amount of detailed information required on imported food labels.

High Inflation, Exchange Rate Movements Make It Difficult to Measure Russia's Internal Support

As part of its accession country schedule, Russia will be required to quantify the level of support provided to agricul-

ture, by calculating the aggregate measurement of support (AMS), and commit to reduce the base AMS over a set number of years. The Uruguay Round Agreement on Agriculture established the AMS as the method for quantifying support to agriculture. The AMS calculation includes all trade-distorting policies, except those identified as exempt in the Agreement on Agriculture. These policies include direct price support, measured by the difference between the world market price and an administered support price for a product, multiplied by the quantity of output eligible for the administered price. Other examples include acreage payments, input subsidies, payments based on livestock numbers, and certain subsidized loan programs. Green policies, excluded from the AMS calculation, are programs that do not provide price support, directly affect production levels, or involve transfers from consumers.

The total AMS aggregates product-specific support if it accounts for more than 5 percent of the value of a commodity, and nonproduct-specific support that exceeds 5 percent of total agricultural production. The AMS is expressed as an absolute monetary value. The WTO Secretariat has defined the base period for acceding countries as the 3 most recent years of available data.

As a country in the process of market reform, Russia (as well as other NIS/B countries) faces special challenges in using the methodology established in the Agreement on Agriculture to calculate the AMS. Many of the problems arise because the economy retains features of the previous centrally planned system, while new market-oriented policies and institutions are being created.

One example is the Federal Food Corporation (FFC), which was supposed to act as an intervention-type organization, but in reality functions more or less like a Soviet-style procurement agency that buys for certain state needs (instead of intervening in the market only when prices fall). The FFC receives budget funds to purchase commodities to supply urban areas, the far North, and the military, and to build stocks. The prices producers receive from the FFC are often lower than market levels (due to payment delays and insufficient budget funding). In addition, Russian producer prices for many commodities have been below world levels. The main reason is deficient physical and institutional infrastructure for marketing output. Poor infrastructure creates high distribution and marketing costs that keep domestic producer prices below world prices.

The isolated effect of state procurement at administered prices and deficient infrastructure has often been to "tax" Russian agriculture by keeping domestic prices below world levels. To take these policies into account when calculating the AMS would lower the total estimate. Because the general spirit of the AMS is to measure price support, should any apparent taxation from state policy be ignored in computing the AMS?

Another reason for the price gap is that during the early years of reform the Russian ruble was severely undervalued from a purchasing power parity point of view. (This means that a U.S. dollar, or the currency of any Western country, bought a lot more in terms of a standard basket of consumer goods in Russia than in the currency's home nation.) The undervaluation occurred mainly because high inflation and general eco-

Table 16--Aggregate measurement of support, Russia

	1993	1994	1995	1993-95 average
<i>Trillion rubles</i> ²				
Total AMS	52.8	22.9	28.5	34.7
Product-specific	15.1	7.5	3.7	8.7
Nonproduct-specific	37.7	15.4	24.8	26.0
<i>\$billion</i> ²				
Total AMS	11.6	5	6.2	7.6
Product-specific	3.4	1.6	0.8	1.9
Nonproduct-specific	8.2	3.4	5.4	5.7

¹ ERS estimates.

² Calculated in constant 1995 rubles. Conversion to U.S. dollars at 1995 commercial exchange rate.

Source: ERS.

economic uncertainty hurt confidence in the ruble, resulting in massive capital flight.

As Russia has reduced inflation and stabilized its macroeconomy, the ruble has appreciated greatly in real terms. From January 1993 to December 1996 the ruble rose about 450 percent against the U.S. dollar. This is probably the strongest argument, in computing the AMS, for ignoring the fact that Russian domestic producer prices have been below world prices—that Russia's negotiated AMS should not be lowered because of conditions peculiar to transition. Thus, the ERS calculation of the Russian AMS presented in this article ignores any possible taxation that could occur when domestic producer prices are under world levels.

Another serious problem in calculating the AMS arises because of high Russian inflation during the early 1990s. Inflation in 1993, 1994, and 1995 equaled 840, 215, and 130 percent, respectively. If the AMS is expressed in rubles, high inflation requires that all annual AMS values be expressed in constant rubles of a given year. One option is to calculate the AMS in 1995 rubles, using the GNP deflator. An ERS estimate of Russia's average AMS over 1993-95, expressed in 1995 constant rubles, equals 35 trillion rubles, or \$8 billion (table 16). This compares to the total value of Russian agricultural output in 1995 of about \$30-\$35 billion.

Regional Trade Policies and NIS Trade Arrangements Require Attention

Two other issues involving Russia's economic transition relevant to WTO accession are (1) regional controls on agricultural flows and (2) trade agreements with other countries of the former USSR. Many regional governments have restricted agricultural flows, to a large degree through their continued power of procurement. While most controls have been on the export side, some oblasts also appear to be turning to import restrictions. For example, the Sverdlovsk oblast legislature included a 50-percent import tariff on poultry meat in the oblast's 1996 budget, while the Magadan region recently introduced its own quotas and licensing for vodka imports.

Regional trade policies are a serious problem for Russian WTO membership. First, the fact that regional governments have the power to set their own trade policies means that the Russian federal government will not know the specific practices in operation throughout the country. Second, even if the federal government did know, its current weakness vis-a-vis the regions could make correction and compliance with established rules difficult.

In recognition of this problem, the Russian Duma passed a law at the end of April declaring the Russian constitution and federal legislation to be supreme on all Russian Federation territory. However, the Russian newspaper *Kommersant-Daily* reported that the law would upset the "truce" between Moscow and the regions, because the power-sharing agreements would be suspended until the adoption of special federal laws. Moreover, the newspaper predicted that the Federation Council, the upper chamber of parliament, will reject the law, which illustrates the difficulty in addressing this issue.

Russia's agricultural trade with other NIS countries raises questions of state trading. Much of this trade was conducted through inter-state agreements that specify trade volumes. As recently as 1995, the federal contract corporation, Roskontrakt, was designated as the sole Russian agent to fulfill Commonwealth of Independent States (CIS) inter-state trade agreements. The use of a sole agent to trade on a noncommercial basis appears to constitute state trading, while inter-state barter trade agreements raise questions of trade discrimination.

WTO Membership Will Benefit Russia

Although the process of WTO accession can take up to several years as member countries review and evaluate acceding countries' trade policies and legislation, WTO membership should prove highly beneficial for both Russia and its trading partners. Russian producers should benefit because membership would help bolster market reforms in the agriculture and food sector, making it more efficient, competitive, as well as more attractive for investment. Reduced protectionism would also benefit Russian consumers through lower food prices and a greater variety of foodstuffs.

Another advantage of WTO membership is that it would provide multilateral most-favored nation treatment, as well as access to the WTO dispute resolution mechanism, which would help put Russian exports on a more level playing field, and give Russia the ability to remedy trade disputes in a multilateral forum with established rules. In addition, Russia would obtain a "seat" at the negotiating table, allowing participation in future negotiating rounds and a say in how new WTO rules are formulated.

Russia's trading partners would also benefit from the country's accession. First, WTO membership would make it difficult for Russia to increase trade barriers. Second, it would draw Russia into a multilateral, rule-based trade framework. This would make the country more accountable for its trade policy behavior and possibly reduce its involvement in regional trade arrangements with other countries of the former USSR, which are often based more on political rather than economic considerations.

Ukrainian Land Reform and Farm Privatization: Still a Long Road Ahead

Land reform, agricultural enterprise privatization, and farm restructuring are important components of a successful transition to a market economy. The process in Ukraine, however, as in many countries of the NIS/B region, has proven difficult and slow. Declarations from President Kuchma and other policymakers appear to suggest a commitment to speeding up the process. Ukraine has accelerated its distribution of land shares within collective farms and set a schedule for further reforms. Nonetheless, land ownership rights remain unclear. Piecemeal legislation and conservative attitudes within the agricultural sector continue to impede progress in land reform. [Britta S. Bjornlund]

Land Reform Could Prove Essential To Sustainable Agricultural Growth

For Ukrainian agriculture to reach its full potential, it must go through an extensive restructuring process to cut costs and increase profitability. Given that the government is unable to enforce hard budget constraints on farms and agribusinesses, land privatization might provide the impetus for farm restructuring and management changes (see also discussion on page 4).

First, land privatization would strengthen the profit motive. Ukrainian statistics indicate that private land ownership would raise productivity. Data show, for example, that while private household plots in Ukraine occupied only about 12 percent of agricultural land in 1996, they produced over 47 percent of total agricultural output. Second, land privatization would foster the development of a functioning land market, whereby labor and other resources could enter or exit farms. Land plots could be freely bought, sold, or rented, allowing the most efficient use of available resources. Without land reform in Ukraine, labor remains immobile. Third, privatized land would prove an invaluable asset for farmers as collateral against loans. Under current conditions, farm operators are left with little choice but to barter their future production for inputs offered by the state.

Ukraine Reorganizes State and Collective Farms Yet Stalls in Support for Private Agriculture

Ukraine has not yet shown a commitment to private agriculture. Although the majority of Ukraine's farms, as in **Russia**, have been officially transformed into joint-stock companies called collective agricultural enterprises, they have undergone little change in management, production choices, or resource allocation. While many restructured farms received paper certificates confirming members' rights to land and property shares, these entitlements have not created a real relationship between farmer and farmland and have done little to strengthen the profit motive.

Ukraine does have the beginnings of a private farming sector with two distinct classifications: household plots and private (peasant) farms. First, many Ukrainians farm small subsidiary or household plots. Produce from these plots is then kept for personal use or sold for personal profit. The share of agricultural output from household plots is grow-

ing and these plots could be the foundation for an expanded and successful private sector. Second, in the last few years, a small number of private farms has emerged. Difficult economic conditions, unclear legislation, and inexperience, however, have hindered their growth and importance in Ukraine's agriculture.

Legislation Allows for Land Ownership but Ambiguities Thwart Functioning Land Markets

Despite the fact that private farms occupy only 2 percent of agricultural land and household plots account for 12 percent, Ukraine possesses a basic legal framework for land ownership. Ukraine's Land Code of 1992 gave individuals the right to obtain land for family and private farms, private plots, gardening, and dacha (summer home) construction. Presidential decrees in 1994 and 1995 outlined the free transfer of land from the state into collective and private ownership. The Constitution of Ukraine, passed in June 1996, guaranteed the right to private property and land plots. In January 1997, government officials called for an acceleration in land reform and agricultural privatization. Whether they can adhere to such promises, however, remains to be seen.

Land reform in Ukraine encompasses three stages. First, land is denationalized and ownership is given to the transformed collective farms. The farm receives a state deed reclassifying the farm into collective ownership. In addition, the farm receives an official list of its members, who have land and property rights to its land and property. With the approval of the raion (district) administration, this list can be amended, to include, for example, workers in the social sphere (such as kindergarten teachers, medical workers, etc). In the second stage, farm members receive their right to land and property shares. The allocation of property shares is handled differently than for land. Property shares are calculated based on the individual's tenure and salary level. In terms of land, however, the Land Code states that each individual is entitled to an equal share of land. The raion administration issues certificates, guaranteeing the right to land, to each member of the list. The third stage of land reform envisions new collective enterprises evolving into joint-stock, reformed collective, or other ownership enterprises that operate on the basis of private land ownership.

There are numerous ambiguities in the current notion of private land ownership in Ukraine. Farm members receive a certificate guaranteeing their right to a *share of land* rather than title to the land itself. The farm worker, having received a land share certificate, faces two common options: take the land share in kind and exit the collective to start a private farm, or remain a general shareholder in the collective. Although the majority of farm workers have chosen the latter option, most remain unaware that their right to a land share can be legally sold, gifted, exchanged, leased, or inherited. In addition, leasing and contractual rights, estimation of the value of a land share in the collective charter stock, and rights to dividends are complex and unclear. In essence, land reform policy, rather than creating a class of landowners, is creating a class of shareholders who have little understanding of their rights and options.

Those who choose to exit the collective agricultural enterprise can return their certificate and receive a plot of land from the collective. Few choose this option, perhaps due to the high degree of risk. A farmer might receive an unproductive lot or one distant from local infrastructure. Furthermore, because farmers have yet to receive legal title to the land, they face the risk that the land might one day be confiscated. The owner's right to lease or sell the land is also unclear. Currently the sale of agricultural land inherited from the state is subject to a 6-year moratorium. Ukraine's parliament imposed the moratorium in 1995. Some argue that the new landowners do have the right to sell their land, due to the fact that the land was inherited from the collective agricultural enterprise rather than from the state. Yet in practice, the moratorium serves to obstruct land sales and impedes the transition to a functioning land market.

Certainly, the land reform program has reduced the amount of state-owned land. Some estimates show that over 64 percent of land is currently in some form of non-state ownership. As of August 1, 1996, land was distributed to over 9,500 collectives and other forms of non-state ownership. Approximately 21.9 million hectares, or 60 percent of agricultural farm land, were transferred from state to collective ownership, and about 0.8 million hectares are located in private farms (table 17). In the collective agricultural enterprises, more than 2.5 million citizens have received land

share certificates. In addition, other Ukrainian citizens had the opportunity to receive land from the State Reserve Fund to start or expand private household plots or private farms.

Western Ukraine Implements Progressive Land Reform Measures Despite Lack Of Central Support

Ambiguities in Ukraine's land reform policies have allowed some local governments to pursue different courses of action. The oblasts of Lviv and Ivano-Frankivsk provide an interesting example due to the progressive nature of their privatization endeavors. The leaders of these two oblasts took a radical position toward the Land Code and farm reorganization. They oriented local policy on the idea that there could be only two types of ownership: state and private. The oblasts decided that private plots attached to collective agricultural enterprises should not be distributed to collective ownership. Instead the oblasts divided the land into equal plots and distributed them among individual owners. They disbursed local certificates that guaranteed individuals private ownership of specific land parcels.

While this plan did not comply with land legislation, there have been no official criticisms from Kiev. In fact, when in 1994 a presidential decree changed the language to specify the right to a land share rather than private ownership itself, Lviv and Ivano-Frankivsk had already distributed all of the agricultural land in their oblasts. Currently, many of these new landowners lease their land to other farmers. Data from these oblasts show that production declines were significantly less than the Ukrainian average. Ukrainian production declined an average of 29 percent from 1992-93 to 1994-95, whereas output in Lviv and Ivano-Frankivsk declined 18 and 11 percent, respectively.

Private Agriculture Emerges, Accounting For Increasing Share of Agricultural Output

Closely tied to the need for functioning land markets is the need for financially viable farming units and private agriculture. While officials boast that as of January 1, 1997, 75 percent of state farms and 99 percent of collective farms have been reformed or privatized, much of the transformation is in name only. Most large-scale farms continue to operate without restructuring, are unprofitable, and are falling deeper into debt. Management, for the most part, has remained unchanged. The paper reorganization has provided little economic or other stimuli for collectives to restructure into profitable production units.

While the number of private farms grew notably from 2,000 in 1990 to 32,000 in 1995, it has not increased significantly during the last 2 years. In fact as of January 1, 1997, there were 35,400 private farms, up less than 2 percent from 1996. Private farms occupy 835,000 hectares of land, or only about 2 percent of total agricultural land. There are numerous obstacles to private farming, including lack of initial capital, difficulties getting credit, uncertain legislation, non-receipt of land titles, official limitations on farm size, and little access to social services once provided by the collective. Private farms cannot rely on stable input or output markets, which remain underdeveloped. In addition, most private farmers have little access to credit.

Table 17--Ownership of agricultural land, Ukraine ¹

Agricultural enterprise type	Arable	Pasture	Total
1,000 hectares			
Collective enterprises	22,040	4,065	26,413
State enterprises	5,719	1,149	7,116
Cooperatives	57	9	67
Joint stock partnerships	622	130	766
Private farms	748	72	822
Private household plots	3,641	777	4,866
Other private users	162	554	723
Total agricultural land	33,150	7,312	41,496

¹ As of July 1, 1996.

Source: Institute of Agrarian Economics, Ukraine.

Table 18 -- Private share of total output, including farmers and household plots , Ukraine

Crop type	1990	1995	1996
<i>Percentage</i>			
Vegetables	27	73	82
Potatoes	71	96	96
Meat	27	45	57
Milk	24	45	52

Source: Institute of Agrarian Economics, Ukraine.

Household plots, however, play a crucial role in Ukraine's agriculture. In 1990 they accounted for only 6 percent of total agricultural land yet produced about 26 percent of total value of output. As of July 1, 1996, land holding and production by household plots had increased significantly to 12 percent and 47 percent, respectively. Data from 1996 show that household plots proved particularly important in a few key crops, as they produced 95 percent of the total volume of potatoes, 82 percent of vegetables, 51 percent of milk, and 59 percent of eggs (table 18).

Private and household plot farmers, for the most part, market their goods themselves through channels such as farmers' markets and trade organizations. These channels will likely grow in importance as Ukraine phases out its state procurement system and moves toward a market economy.

Agro-industrial Privatization Progresses Slowly

Privatization in Ukraine's downstream (processing, wholesaling, and retailing) and upstream (input) industries is moving even more slowly than in farming. As of January 1, 1997, only about 42 percent of agricultural processing, service, and construction enterprises had been privatized or reformed (table 19). As with farm privatization, the transformation is often in name only. The process has developed faster in the livestock processing industry, as 93 percent of processing enterprises for meat, and 53 percent for dairy, have been "privatized" or reformed.

Similar to **Russia** and **Kazakhstan**, a controlling packet of shares in Ukraine's agricultural processing plants is offered to primary producers free of charge or at highly discounted prices. Although President Kuchma repeatedly vetoed this legislation, a slightly amended version was finally allowed to stand. Such legislation severely limits the autonomy of processors. Because farmers hold a controlling packet of shares, there is a strong incentive to offer the farmer higher prices for produce or to charge farmers a reduced price for processing. As a result, processors encounter difficulties maintaining or increasing profits.

Lack of Functioning Land Markets and Incomplete Farm Privatization Hinder Growth

Despite initial reform measures and recent plans for acceleration, Ukraine's policymakers remain unable to reach a consensus concerning land ownership. The parliament, in opposition to the president, has not passed requisite legisla-

Table 19 -- Reformed enterprises, Ukraine

Type of enterprise	Total	Privatized or reformed ¹	
		<i>Number</i>	<i>Percentage</i>
State farms and agricultural enterprises	1,868	1,374	74
Collective farms	9,633	1,508	99
Processing, service, and construction	5,324	2,274	43
Inter-farm enterprises	3,163	1,658	52
TOTAL	19,988	14,814	74

¹ As of January 1, 1997.

Source: Ministry of Agriculture and Food, Ukraine.

tion that would ensure land ownership rights. To date, much of reform has been implemented through presidential decree, a method unlikely to survive if Ukraine moves toward democracy. Western oblasts such as Lviv and Ivano-Frankivsk, however, demonstrate the possibilities for privatization in spite of legislative and institutional obstacles.

Nonetheless, because of Ukraine's deep roots in collective farm ownership, many farmers regard private entrepreneurship with apprehension. Rather than strengthening the relationship between effort and reward, collective agriculture will more likely continue to lobby the state for direct and indirect subsidies. Regardless of their production behavior, Ukraine's former state and collective farms may find they can create or increase profits by removing the social welfare burden and reallocating it to local budgets.

In the spring of 1997 there were some potentially positive signs for agricultural reform. In April 1997, the president issued a decree legalizing the leasing of land. In May 1997, plans were discussed to restructure and streamline the Ministry of Agriculture, and to abolish the state committees for bread, food processing, and wine production. Plans to privatize grain elevators and agricultural processing plants were also noted. With regard to land sales, the Ukrainians asserted that the Ministry of Justice issued a statement certifying that the moratorium applies to only about 2 percent of Ukraine's total land mass. In addition, Minister of Agriculture Zubets indicated that Ukraine was working on a new land law.

Yet it is unlikely that Ukraine will have fully functioning land markets in the near term. Pressure from international institutions and donor agencies may convince Ukraine to clarify and remove the moratorium on agricultural land sales. As in **Russia**, however, landowners in Ukraine may be too cautious to begin buying or selling land plots. In addition, if they remain insulated from market pressures, farms may prove sluggish in attempts to restructure or reorganize. Without major land reform, prospects for improving agricultural productivity in Ukraine will remain poor.

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Table 1 -- Economic indicators, NIS/B countries

Item	1992	1993	1994	1995	1996*	Item	1992	1993	1994	1995	1996*
<i>Percent change</i>											
Russia						Uzbekistan					
GDP	(14.5)	(8.7)	(12.6)	(4.2)	(6.0)	GDP	(11.1)	(2.4)	(3.5)	(1.2)	2.0
Industrial production	(18.0)	(14.1)	(20.9)	(3.3)	(5.0)	Industrial production	(6.7)	3.6	1.6	0.2	6.0
Agricultural production	(9.4)	(4.4)	(12.0)	(8.0)	(7.0)	Agricultural production	(6.4)	1.0	(7.7)	(3.0)	(7.0)
Consumer prices	2,564	840	215	131	22	Consumer prices	600	713	1,280	90	na
Ukraine						Azerbaijan					
GDP	(13.7)	(14.2)	(23.0)	(11.8)	(10.0)	GDP	(22.6)	(23.1)	(21.9)	(17.2)	1.0
Industrial production	(6.4)	(8.0)	(27.3)	(12.0)	(5.1)	Industrial production	(23.7)	(7.0)	(22.7)	(21.4)	(6.7)
Agricultural production	(8.0)	2.0	(16.7)	(4.0)	(8.0)	Agricultural production	(25.0)	(15.0)	(13.0)	(5.0)	5.0
Consumer prices	2,000	10,160	400	180	40	Consumer prices	910	1,290	1,790	80	20
Belarus						Armenia					
GDP	(9.6)	(10.6)	(15.8)	(10.0)	3.0	GDP	(41.8)	(8.6)	5.5	6.9	4.0
Industrial production	(9.4)	(7.4)	(17.1)	(11.9)	3.2	Industrial production	(48.2)	(10.3)	6.9	2.4	1.0
Agricultural production	(9.0)	4.0	(14.0)	(5.0)	2.0	Agricultural production	(13.0)	24.0	3.0	4.7	7.0
Consumer prices	970	2,000	1,956	224	53	Consumer prices	730	10,900	1,760	32	20
Kazakhstan						Georgia					
GDP	(13.0)	(12.9)	(24.6)	(8.9)	1.0	GDP	(40.3)	(39.4)	(30.0)	2.4	11.0
Industrial production	(13.8)	(14.8)	(28.5)	(8.2)	0.3	Industrial production	(45.8)	(26.6)	(39.7)	(9.8)	7.7
Agricultural production	1.0	(5.0)	(20.1)	(27.1)	(10.0)	Agricultural production	(17.0)	(38.0)	(10.0)	10.0	15.0
Consumer prices	1,510	2,170	1,160	62	39	Consumer prices	913	3,130	7,380	60	na
Moldova						Estonia					
GDP	(29.1)	(1.2)	(31.2)	(3.0)	(8.0)	GDP	(14.3)	(8.5)	(2.7)	2.9	3.0
Industrial production	(27.1)	0.3	(29.9)	(6.0)	(8.5)	Industrial production	(29.0)	(28.7)	(3.3)	2.5	2.0
Agricultural production	(16.0)	10.0	(25.0)	4.0	(10.0)	Agricultural production	(17.9)	(13.8)	(10.7)	(1.8)	(2.5)
Consumer prices	2,198	837	116	24	20	Consumer prices	1,076	90	48	29	23
Kyrgyzstan						Latvia					
GDP	(13.9)	(15.5)	(20.1)	(6.2)	6.0	GDP	(34.8)	(14.9)	0.6	(1.6)	2.3
Industrial production	(26.4)	(25.3)	(28.0)	(17.8)	10.8	Industrial production	(34.5)	(32.1)	(7.0)	(5.8)	2.3
Agricultural production	(5.0)	(10.0)	(17.4)	(2.0)	3.0	Agricultural production	(15.7)	(22.4)	(20.4)	(2.1)	(7.5)
Consumer prices	1,259	1,363	87	32	35	Consumer prices	951	109	36	25	18
Tajikistan						Lithuania					
GDP	na	(17.3)	(21.3)	(12.4)	(17.0)	GDP	(34.0)	(27.1)	0.6	3.1	3.5
Industrial production	(24.2)	(7.8)	(30.8)	(5.1)	(19.8)	Industrial production	(30.0)	(34.0)	(28.0)	7.9	na
Agricultural production	(27.0)	(4.0)	(25.0)	(28.0)	(15.0)	Agricultural production	(23.8)	(7.7)	(18.0)	1.8	15.0
Consumer prices	960	1,485	240	2,400	270	Consumer prices	1,163	189	45	36	13
Turkmenistan											
GDP	na	na	na	na	0.0						
Industrial production	(14.9)	4.0	(25.0)	(6.9)	17.9						
Agricultural production	(9.0)	8.0	(11.0)	(10.0)	(2.0)						
Consumer prices	830	1,770	1,330	na	na						

na = Not available. () = Negative value. * = Preliminary.

Sources: Statkom SNG; Goskomstat Rossii; OECD; IMF.

Table 2 --National currencies exchange rates, NIS countries

	1993		1994		1995		1996	
	End of the year	Year average	End of the year	Year average	End of the year	Year average	End of the year	Year average
<i>National currency units per 100 Russian rubles</i>								
Azerbaijan, manat	8.70 ¹	n/a	121.00	44.83	95.00	97.40	74.00	82.80
Armenia, dram	5.88	0.50	10.70	12.93	8.40	8.65	7.80	8.01
Belarus, ruble	451.00	214.00	292.00	145.90	247.00	252.00	279.00	261.00
Georgia, lari	8,300.00 ²	1,216.00 ²	33.50 ²	44.70 ²	0.03	0.03	0.02	0.02
Kazakstan, tenge	0.46	0.25	1.62	1.60	1.39	1.35	1.36	1.37
Kyrgyzstan, som	0.64	0.55	0.30	0.53	0.24	0.24	0.30	0.25
Moldova, ley	0.29	0.14	0.10	0.20	0.09	0.10	0.08	0.09
Russia, ruble	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Tajikistan, ruble	100.00	100.00	100.00 ³	100.00 ³	6.00	2.36	5.60	5.50
Turkmenistan, manat	0.17	0.20	2.31	0.81	4.31	2.47	73.10 ⁴	68.20 ⁴
Uzbekistan, sum	100.00	100.00	0.71	0.40	0.76	0.66	0.99	0.78
Ukraine, grivna	1,019.00	434.00	3.10 ⁵	1.30 ⁵	3.90 ⁵	3.20 ⁵	0.03	0.04
<i>National currency units per US \$1</i>								
Azerbaijan, manat	118.0 ¹	na	4,182.0	1,169.0	4,440.0	4,417.0	4,098.0	4,296.0
Armenia, dram	75.0	8.7	405.5	288.4	402.0	405.9	435.1	413.5
Belarus, ruble	6,990.0	3,160.0	10,600.0	3,592.0	11,500.0	11,517.0	15,500.0	13,573.0
Georgia, lari	na	na	1,330.0 ²	1,099.0 ²	1.3	1.3	1.3	1.3
Kazakstan, tenge	6.3	2.6	52.3	35.9	64.0	60.9	73.3	67.3
Kyrgyzstan, som	8.0	5.0	10.6	10.8	11.2	10.8	16.7	12.8
Moldova, ley	3.6	1.5	4.3	4.1	4.5	4.5	4.7	4.6
Russia, ruble	1,247.0	932.2	3,550.0	2,204.0	4,640.0	4,554.0	5,560.0	5,124.0
Tajikistan, ruble	1,247.0	932.2	3,550.0 ³	2,204.0 ³	239.5	107.6	328.0	292.9
Turkmenistan, manat	2.0	na	75.0	19.5	200.0	110.4	4,070.0 ⁴	3,509.0 ⁵
Uzbekistan, sum	1,247.0	932.2	25.0	10.0	35.5	29.8	54.7	40.2
Ukraine, grivna	12.6 ⁵	4.5 ⁵	107.9 ⁵	31.7 ⁵	179.4 ⁵	147.3 ⁵	1.9	1.8

n/a = not available.

¹ End Jan. 1994.² Exchange rate lari: 1 lari = 1Mil. coupons, effective till Sept. 25, 1995.³ Since May 10, 1995 established new national currency - Tajik. ruble. Before used Russian ruble.⁴ Since January 1996, the National Bank of Turkmenistan established new exchange rate of manat.⁵ Thousand karbovantsev. Since September 2, 1996, established new currency - grivna. 1 grivna=100,000 karbovantsev.

Sources: Statkom SNG.

Table 3 -- Monthly average exchange rate, Russia

	1990	1991	1992	1993	1994	1995	1996	1997
<i>Ruble/dollar</i>								
January	10	25	198	495	1,452	3,859	4,689	5,601
February	12	34	186	569	1,576	4,259	4,765	5,654
March	14	36	152	665	1,741	4,749	4,837	5,704
April	16	35	154	767	1,792	5,030	4,904	na
May	21	38	122	928	1,882	5,062	4,988	na
June	24	41	126	1,080	1,958	4,718	5,060	na
July	24	52	143	1,025	2,026	4,515	5,147	na
August	23	52	168	986	2,122	4,413	5,291	na
September	22	55	224	1,069	2,342	4,472	5,382	na
October	22	64	359	1,187	3,047	4,502	5,430	na
November	20	107	426	1,194	3,151	4,549	5,482	na
December	23	170	415	1,240	3,346	4,621	5,536	na
Annual average	19	59	223	934	2,203	4,562	5,126	na

Source: Russian Economic Trends, Russian European Center for Economic Policy.

Table 4 -- U.S. agricultural exports to NIS/B region, calendar 1990-1996

Commodity	1990	1991	1992	1993	1994	1995	1996
<i>Million dollars</i>							
Wheat	543	429	940	518	192	118	193
Corn	1,101	1,237	662	528	14	15	14
Soybeans	61	167	54	15	--	25	3
Soybean meal	341	508	309	165	86	44	39
Pork	--	--	--	26	8	72	47
Poultry meat	98	65	16	89	330	672	1,035
Dairy	69	2	129	126	81	60	27
Fruits, nuts, veg.	19	12	28	45	79	58	76
Sugar & tropical prods.	--	14	19	93	62	32	31
Other	39	74	189	153	148	250	282
Total	2,271	2,508	2,346	1,758	1,000	1,346	1,747
<i>1,000 tons</i>							
Wheat	3,690	4,999	7,457	4,115	1,580	689	943
Corn	9,471	11,369	6,127	5,161	122	133	101
Soybeans	274	742	242	65	--	107	17
Soybean meal	1,582	2,358	1,438	789	419	217	144
Pork	--	--	--	16	5	47	27
Poultry meat	137	83	22	119	399	803	1,060
Dairy	44	--	67	110	46	55	15
Sugar & tropical prods.	--	42	32	43	34	24	9

-- = negligible or none.

Source: USDA.

Table 5 -- U.S. meat exports to NIS/B region, and major countries (by type of meat)

Commodity ¹	1992	1993	1994	1995	1996	Commodity	1992	1993	1994	1995	1996
--1,000 tons--						-- Millions \$ --					
Beef and veal						Beef and veal					
Russia	--	--	1.1	6.2	3.9	Russia	0.5	1.2	3.8	10.1	8.0
Ukraine	--	--	--	--	--	Ukraine	--	--	--	--	--
Kazakstan	--	--	--	--	--	Kazakstan	--	--	--	--	--
Other	--	--	--	0.1	--	Other	--	--	--	0.3	0.1
Total NIS/B	0.3	0.3	1.1	6.3	3.9	Total NIS/B	0.9	1.3	3.8	10.4	8.1
Pork						Pork					
Russia	--	16.2	5.0	46.8	26.5	Russia	--	25.0	8.0	71.6	46.1
Ukraine	--	--	--	--	0.1	Ukraine	--	--	--	--	0.3
Kazakstan	--	--	--	--	--	Kazakstan	--	--	--	--	--
Other	--	0.2	0.1	0.1	0.2	Other	--	0.9	--	0.3	0.3
Total NIS/B	0.1	16.4	5.1	46.9	26.8	Total NIS/B	0.3	25.9	8.0	71.9	46.7
Poultry meats						Poultry meats					
Russia	20.2	112.4	382.9	732.0	937.0	Russia	15.1	83.5	309.9	606.6	912.6
Ukraine	--	0.5	--	7.5	16.2	Ukraine	--	1.3	--	10.0	17.0
Kazakstan	--	--	--	--	--	Kazakstan	--	--	--	--	--
Other	--	--	16.3	63.8	106.9	Other	--	--	20.0	55.1	105.7
Total NIS/B	22.3	118.9	399.2	803.3	1060.1	Total NIS/B	16.3	89.1	329.9	671.7	1035.3
Variety meats/offals						Variety meats/offals					
Russia	--	na	22.6	66.7	54.9	Russia	--	na	21.2	63.9	55.9
Ukraine	--	na	--	--	--	Ukraine	--	na	--	--	--
Kazakstan	--	na	--	--	--	Kazakstan	--	na	--	--	--
Other	--	na	--	2.4	1.0	Other	--	na	--	1.9	0.8
Total NIS/B	--	4.9	22.6	69.1	55.9	Total NIS/B	--	3.7	21.2	65.8	56.7
Other prepared meats						Other prepared meats					
Russia	--	na	11.4	26.1	55.8	Russia	--	na	16.4	34.3	76.7
Ukraine	--	na	--	--	--	Ukraine	--	na	0.1	--	--
Kazakstan	--	na	--	--	--	Kazakstan	--	na	--	--	--
Other	--	na	--	--	0.6	Other	--	na	--	--	0.7
Total NIS/B	0.4	3.9	11.5	26.1	56.4	Total NIS/B	0.3	9.6	16.6	34.4	77.4
Total meats NIS/B	23.1	144.4	439.5	951.7	1,203.1	Total meats NIS/B	17.8	129.6	379.5	854.2	1,224.2

¹ Meats presented in these tables include fresh, frozen, prepared, and preserved.

na = not available. -- = negligible or none.

Source: USDA, FATUS.

Table 6--Extra-NIS agricultural imports, Russia ¹

Commodity	1991	1992	1993	1994	1995	1996
<i>1,000 tons</i>						
HVPs:						
Meat (beef, pork) ²	517	291	85	392	594	528
Poultry ²	89	46	74	496	824	748
Butter	153	25	70	103	169	84
Dry milk	77	49	15	33	45	na
Citrus	266	43	172	609	455	420
Apples and pears	156	79	81	261	381	410
Bananas	8	2	19	379	503	na
Wheat flour	556	944	54	13	234	264
Vegetable oil	201	463	93	127	352	81
Sugar	3,269	3,691	3,109	1,462	1,551	1,820
Coffee	45	35	13	26	26	25
Cocoa beans	17	24	22	58	56	55
Tea	143	47	55	85	142	na
Bulk commodities:						
Wheat	10,689	17,593	5,699	1,181	383	580
Barley	2,882	3,967	615	15	14	15
Corn	5,457	5,490	4,391	864	237	124
Rice	322	7	43	18	95	na
Soybeans	170	68	na	na	65	na
<i>--Billion dollars--</i>						
Total agricultural imports ³	12.4	9.6	6.0	8.6	9.7	7.7
<i>--Percent--</i>						
Agriculture's share of total import value ³	28	26	22	30	29	25

na = Not available.

¹ Includes imports from the Baltic countries after 1992. Data for 1994-96 are from the Russian Customs Committee.

² Fresh/frozen meat. ³ Includes fish and seafood, alcoholic beverages, and tobacco products.

Sources: Goskomstat, Statkom SNG, Customs Committee of RF.

Table 7 --Annual per capita consumption of selected food products, NIS/B countries

Country	Meat and meat products ¹								Milk and dairy products ²								Eggs												
	1990	1991	1992	1993	1994	1995	1996	1990	1991	1992	1993	1994	1995	1996	1990	1991	1992	1993	1994	1995	1996								
-----Kilograms-----																						-----Number-----							
Russia	75	69	60	59	57	55	na	386	347	281	294	278	252	na	297	288	263	250	236	211	na								
Ukraine	68	66	53	46	44	39	37	373	346	285	264	256	245	230	272	256	227	206	183	172	162								
Belarus	75	73	72	70	63	58	59	425	415	396	384	378	363	364	323	320	305	306	302	294	300								
Moldova	58	56	46	35	30	27	na	303	259	198	174	163	150	na	203	195	166	130	100	100	na								
Kazakstan	71	71	61	59	56	51	50	307	303	269	260	245	226	205	222	206	175	170	140	100	70								
Uzbekistan	32	30	27	27	33	33	na	210	196	175	177	173	173	na	120	107	80	74	63	50	na								
Kyrgyzstan	54	48	46	44	43	38	na	266	249	206	193	183	172	na	154	144	128	81	46	33	na								
Tajikistan	26	21	18	14	15	14	na	161	124	127	136	134	130	na	111	82	34	23	12	10	na								
Turkmenistan	43	38	38	33	30	24	na	212	176	185	196	183	173	na	101	82	75	75	64	60	na								
Armenia	44	31	20	20	22	22	na	446	392	122	99	150	150	na	163	143	65	45	57	57	na								
Azerbaijan	32	26	20	17	12	15	na	292	217	204	170	150	139	na	143	116	103	70	76	76	na								
Georgia	42	31	21	19	17	20	na	289	135	87	80	80	86	na	140	139	55	46	50	53	na								
Lithuania	60	66	65	56	48	na	na	480	315	334	319	275	na	na	305	293	207	143	155	na	na								
Latvia	77	69	54	50	48	50	na	454	420	370	355	345	356	na	259	232	213	210	206	218	na								
Estonia	78	60	59	51	50	52	56	502	409	351	272	274	291	269	290	261	224	210	218	224	195								
NIS/B average	56	50	44	40	38	na	na	340	287	239	225	218	na	na	207	191	155	136	127	na	na								

Country	Grain products ³								Potatoes								Vegetables							
	1990	1991	1992	1993	1994	1995	1996	1990	1991	1992	1993	1994	1995	1996	1990	1991	1992	1993	1994	1995	1996			
-----Kilograms-----																								
Russia	119	120	125	124	124	124	na	106	112	118	127	122	125	na	89	86	77	71	68	73	na			
Ukraine	141	143	143	145	135	128	122	131	116	133	150	136	122	126	102	102	89	90	84	99	86			
Belarus	126	126	119	122	120	120	120	170	165	169	178	175	180	185	78	78	76	78	79	82	86			
Moldova	171	175	170	170	139	139	na	69	69	67	95	84	60	na	112	113	95	94	78	83	na			
Kazakstan	146	147	153	180	191	176	na	85	75	86	80	75	63	65	75	62	62	50	56	54	55			
Uzbekistan	170	167	164	162	152	162	na	29	25	27	25	25	27	na	107	114	124	122	130	134	na			
Kyrgyzstan	139	134	135	135	134	109	na	69	62	68	59	58	82	na	78	73	75	50	52	44	na			
Tajikistan	167	131	158	155	155	155	na	35	31	32	31	30	28	na	95	83	101	98	97	97	na			
Turkmenistan	165	167	170	142	147	147	na	21	19	23	33	30	26	na	123	123	92	95	95	90	na			
Armenia	129	130	114	110	134	134	na	58	77	64	73	80	80	na	132	145	132	99	131	139	na			
Azerbaijan	151	134	150	153	141	142	na	27	22	26	25	23	23	na	67	65	53	58	56	56	na			
Georgia	183	169	147	114	140	140	na	41	55	50	48	49	47	na	82	76	54	77	79	87	na			
Lithuania	111	138	120	124	130	na	na	146	128	95	122	125	na	na	64	57	na	na	na	na	na			
Latvia	107	105	110	111	na	na	na	125	115	116	119	na	na	na	69	69	75	71	73	na	na			
Estonia	77	63	82	83	78	76	78	103	105	125	128	125	120	115	79	92	na	na	na	na	na			
NIS/B average	140	137	137	135	na	na	na	81	78	80	86	na	na	na	90	89	na	na	na	na	na			

na = Not available.

¹ Includes offals and edible fat.² Milk and dairy products in milk equivalent.³ In flour equivalent; including pulses.⁴ Provisional.Sources: Statkom SNG; Agrokhlleb Bulletin¹; Goskomstat Rossii.

Table 8 --Private farms, NIS countries¹

Country	Number of farms as of January 1					Total area, as of January 1		Average size		Area as a share of total agricultural land, as of January 1	
	1993	1994	1995	1996	1997	1996	1997	1996	1997	1996	1997
	-- 1,000 units --					-- 1,000 ha --		-- Ha --		-- Percent --	
Azerbaijan	0.2	0.4	1.0	3.2	11.6	60	132.8	19	11	na	na
Armenia	243.0	298.1	312.9	316.4	316.4	429 ³	429.2 ³	1	1	31	na
Belarus	2.0	2.7	3.0	3.0	3.2	62	61	20	21	1	na
Kazakstan	8.5	16.3	22.5	30.8	40.0	12,700	17,900	412	448	7	na
Kyrgyzstan	8.6	12.8	17.3	23.2	30.9	1,994	1495	86	48	20	na
Moldova	0.5	3.1	14.0	16.1	41.2	na	68.5	2	2	na	na
Russia	183.7	269.9	279.2	280.1	279.0	12,011	12,200	43	44	6	5
Tajikistan	0.004	0.2 ²	0.2 ²	0.2 ²	0.2 ²	20 ^{2,3}	20 ^{2,3}	131 ²	131 ²	na	na
Turkmenistan	0.1	0.3	1.0	1.3	1.3	6 ⁴	12	6 ⁴	9	--	na
Uzbekistan	5.9	7.5	14.2	18.1	19.8	265	308	2	16	1	na
Ukraine	14.4	27.7	32.0	34.8	35.4	786 ³	835 ³	23	24	2	2
Total	466.9	639.0	697.3	727.2	779.0	28,334	33,462	68.6	68.6	na	na

na = not available.

¹ 11 countries, except Georgia.

² As of October 1, 1994.

³ Agricultural land - total arable land plus permanent pastures and meadows, not including meadows for deer grazing.

⁴ As of January 1, 1995.

Sources: Statkom SNG, 1996; Goskomstat Rossii, 1996; Sotsial'no - Ekonomicheskoe polozhenie Rossii, 1996.

Table 9 --Share of private sector in total
agricultural output, NIS countries 1

	1990	1991	1992	1993	1994	1995
-- Percent --						
Russia	26	31	32	43	46	46
Ukraine	27	30	37	40	43	46
Belarus	25	27	34	39	40	na
Kazakstan	28	32	35	39	38	na
Moldova	18	22	26	34	38	na
Uzbekistan	28	33	36	38	41	na
Kyrgyzstan	34	38	47	54	59	75
Turkmenistan	18	17	22	22	na	na
Tajikistan	23	27	37	39	na	na
Azerbaijan	35	38	42	48	57	na
Armenia	35	77	96	95	95	na
Georgia	na	na	na	na	na	na

1 Private sector includes household plots and private farms.
Source: Statkom SNG 1996, Goskomstat Rossii, 1997.

Table 10 -- Share of private sector in agricultural output, by commodity, Russia ¹

Commodity	Private sector Total				Private farms				Private plots			
	1993	1994	1995	1996	1993	1994	1995	1996	1993	1994	1995	1996
-- Percent --												
Total ag. output	43.0	46.0	46.0	48.0	3.0	2.0	2.0	2.0	40.0	44.0	44.0	46.0
Grain	5.9	5.8	5.7	5.0	5.3	5.0	5.0	5.0	0.6	0.7	0.7	--
Sunflowers	10.0	11.0	13.0	13.0	10.0	11.0	13.0	11.0	--	--	--	2.0
Potatoes	83.6	89.1	90.9	90.0	1.1	0.9	0.9	0.9	82.5	88.2	90.0	89.1
Vegetables	65.3	68.0	74.3	77.0	1.0	1.0	1.3	1.1	64.3	67.0	73.0	75.9
Meat	41.3	44.9	49.5	52.8	1.3	1.4	1.5	na	40.0	43.5	48.0	na
Milk	35.7	40.4	43.7	46.8	1.1	1.6	1.7	na	34.6	38.8	42.0	na
Eggs	27.3	28.6	30.3	31.7	0.2	0.3	0.3	na	27.0	28.3	30.0	na

¹ For total agricultural output, share in value; for commodities, share in quantity produced.

-- = negligible or none.

Sources: Statkom SNG, 1996,1997 ; Goskomstat Rossii, 1996, 1997; Rossiia-1995 ekonomicheskaiia konjunktura; Sotsial'no-ekonomicheskoe polozhenie Rossii, 1996.

Table 11 -- Share of private sector in livestock inventories, NIS countries

	1991	1992	1993	1994	1995	1996		1991	1992	1993	1994	1995	1996
-- Percent --							-- Percent --						
Russia							Turkmenistan						
Cattle	17	20	23	26	28	30	Cattle	55	58	62	66	na	na
including: cows	25	28	32	36	38	40	including: cows	72	74	78	81	na	na
Hogs	18	22	25	29	33	35	Hogs	2	2	3	4	na	na
Sheeps, goats	28	31	36	41	47	52	Sheeps, goats	30	32	35	37	na	na
Poultry	29	31	33	33	35	38	Poultry	34	19	43	na	na	69
Ukraine							Tajikistan						
Cattle	14	15	16	18	20	22	Cattle	60	63	67	72	na	na
including: cows	26	28	30	33	36	39	including: cows	75	76	68	82	na	na
Hogs	28	30	33	36	42	46	Hogs	2	2	5	5	na	na
Sheeps, goats	15	18	23	27	32	41	Sheeps, goats	50	54	57	60	na	na
Poultry	46	47	51	56	61	64	Poultry	9	12	11	na	na	na
Belarus							Kyrgyzstan						
Cattle	11	12	13	14	15	16	Cattle	40	46	53	60	70	82
including: cows	28	30	32	33	34	35	including: cows	60	64	69	75	81	88
Hogs	30	32	34	36	39	40	Hogs	19	23	26	33	46	56
Sheeps, goats	53	59	64	74	80	86	Sheeps, goats	23	34	47	54	69	84
Poultry	43	44	47	47	50	54	Poultry	57	54	65	75	86	96
Moldova							Armenia						
Cattle	18	23	29	38	46	53	Cattle	31	88	96	97	98	98
including: cows	25	31	38	47	57	64	including: cows	42	92	97	98	98	99
Hogs	19	23	29	38	45	46	Hogs	37	58	47	68	82	91
Sheeps, goats	64	69	73	79	83	85	Sheeps, goats	38	91	96	98	99	99
Poultry	47	48	64	75	76	77	Poultry	27	27	87	87	93	97
Kazakstan							Azerbaijan						
Cattle	31	34	37	42	45	53	Cattle	55	57	63	67	72	77
including: cows	47	50	54	57	59	65	including: cows	69	71	76	78	82	85
Hogs	21	24	28	34	39	53	Hogs	11	11	11	13	23	29
Sheeps, goats	18	21	25	27	32	42	Sheeps, goats	47	49	53	54	58	62
Poultry	33	33	37	29	31	42	Poultry	58	59	67	82	91	93
Uzbekistan							Georgia						
Cattle	63	68	69	71	74	78	Cattle	68	80	87	92	94	na
including: cows	77	79	81	81	82	84	including: cows	78	85	90	93	95	na
Hogs	3	5	5	6	9	15	Hogs	64	81	87	92	93	na
Sheeps, goats	41	47	49	50	53	55	Sheeps, goats	47	53	63	72	79	na
Poultry	27	31	48	48	50	50	Poultry	57	88	89	96	99	na

Note: Private sector includes household plots and private farms.

Source: Statkom SNG.

Table 12 --Livestock inventories, all farms, Jan. 1*, NIS/B countries

Year	Cattle	incl. cows	Hogs	Sheep & goats	Year	Cattle	incl. cows	Hogs	Sheep & goats
----1,000 head----									
Newly Independent States and the Baltics *									
Moldova									
1991	115,578	41,462	75,391	140,423	1991	949	357	1,671	1,253
1992	111,972	41,694	69,105	136,144	1992	910	360	1,500	1,300
1993	106,708	41,154	60,304	130,433	1993	870	370	1,300	1,400
1994	100,813	40,702	54,852	119,704	1994	815	377	1,013	1,420
1995	91,103	38,657	49,069	97,490	1995	751	367	946	1,483
1996	83,185	36,862	45,233	81,190	1996	671	363	948	1,496
1997*	76,126	34,851	39,847	69,678	1997*	605	360	960	1,530
% decline ,	(34)	(16)	(47)	(50)	% decline ,	(36)	--	(43)	--
Azerbaijan					Russia				
1991	1,832	711	157	5,400	1991	57,043	20,557	38,314	58,195
1992	1,826	734	137	5,292	1992	54,677	20,564	35,384	55,255
1993	1,731	735	67	4,901	1993	52,226	20,243	31,520	51,368
1994	1,621	712	48	4,539	1994	48,914	19,831	28,557	43,712
1995	1,633	743	33	4,558	1995	43,297	18,398	24,859	34,541
1996	1,658	764	31	4,574	1996	39,694	17,433	22,600	28,000
1997*	1,770	780	29	4,670	1997	35,800	16,250	19,500	23,600
% decline ,	(12)	--	(82)	(16)	% decline ,	(37)	(21)	(49)	(59)
Armenia					Tajikistan				
1991	640	251	311	1,186	1991	1,352	557	183	3,300
1992	566	251	224	1,022	1992	1,391	586	128	3,400
1993	499	258	84	873	1993	1,246	544	56	3,000
1994	502	270	81	736	1994	1,250	560	47	2,900
1995	504	276	82	636	1995	1,168	535	33	2,700
1996	507	277	80	604	1996	1,199	549	33	2,600
1997*	530	282	77	604	1997*	1,220	550	30	2,500
% decline ,	(22)	--	(75)	(49)	% decline ,	(14)	(4)	(84)	(24)
Belarus					Turkmenistan				
1991	6,975	2,362	5,051	444	1991	829	331	267	5,500
1992	6,577	2,314	4,700	424	1992	899	360	260	5,600
1993	6,221	2,220	4,308	381	1993	1,000	416	212	6,265
1994	5,851	2,199	4,181	323	1994	1,100	478	159	6,313
1995	5,403	2,120	4,005	230	1995	1,181	534	128	6,503
1996	5,054	2,035	3,895	204	1996	1,200	567	85	6,540
1997*	4,850	1,960	3,740	184	1997*	1,200	580	45	6,600
% decline ,	(30)	(17)	(26)	(59)	% decline ,	--	--	(83)	--
Georgia					Uzbekistan				
1991	1,298	552	880	1,600	1991	4,581	1,856	716	9,200
1992	1,208	543	732	1,469	1992	5,100	2,100	700	10,100
1993	1,000	500	476	1,192	1993	5,300	2,200	500	10,300
1994	929	487	365	958	1994	5,291	2,258	391	10,178
1995	944	514	367	793	1995	5,483	2,337	350	10,059
1996	974	531	353	725	1996	5,200	2,282	207	9,300
1997*	1,050	570	350	800	1997*	5,000	2,240	110	8,730
% decline ,	(28)	(12)	(60)	(55)	% decline ,	--	--	(85)	(5)
Kazakhstan					Ukraine				
1991	9,757	3,386	3,224	35,586	1991	24,598	8,378	19,427	8,419
1992	9,592	3,490	2,976	34,556	1992	23,728	8,263	17,839	7,829
1993	9,576	3,623	2,591	34,420	1993	22,457	8,057	16,175	7,237
1994	9,347	3,687	2,445	34,208	1994	21,607	8,078	15,298	6,863
1995	8,073	3,397	1,982	25,132	1995	19,624	7,818	13,946	5,575
1996	6,562	2,975	1,515	18,600	1996	17,557	7,530	13,150	4,100
1997*	5,527	2,594	1,073	13,900	1997	15,626	7,154	11,435	2,950
% decline ,	(43)	(23)	(67)	(61)	% decline ,	(36)	(15)	(41)	(65)
Kyrgyzstan					Baltics				
1991	1,205	506	393	9,968	1991	4,519	1,658	4,797	372
1992	1,210	502	300	9,500	1992	4,288	1,627	4,225	397
1993	1,122	515	247	8,741	1993	3,460	1,473	2,768	355
1994	1,061	509	165	7,296	1994	2,525	1,256	2,102	258
1995	919	480	117	5,072	1995	2,123	1,138	2,221	208
1996	870	471	118	4,275	1996	2,046	1,085	2,218	172
1997*	814	445	83	3,460	1997*	2,110	1,090	2,400	150
% decline ,	(32)	(12)	(79)	(65)	% decline ,	(55)	(35)	(54)	(60)

* = Estimates for 1997.

-- = Not applicable.

, Percent of maximum decline, that is, the percent change of inventories in the "bottom" year compared to 1991. For some countries, which have not bottomed out, the year of maximum decline is 1997. Not applicable for increased inventories.

Source: Statkom SNG, Goskomstat Rossii.

Table 13 --Production of livestock products, all farms, NIS/B countries

	Total meat ¹	Milk	Eggs		Total meat ¹	Milk	Eggs
	1,000 tons		Millions		1,000 tons		Millions
Newly Independent States and the Baltics *				Moldova			
1991	18,478	101,133	79,305	1991	303	1,292	1,061
1992	16,030	90,789	70,638	1992	234	1,135	812
1993	14,336	88,597	64,469	1993	180	976	618
1994	13,126	83,115	58,669	1994	153	909	515
1995	11,383	77,910	53,139	1995	137	837	563
1996	10,532	71,677	49,570	1996	131	755	580
% decline ²	(43)	(29)	(37)	% decline ²	(57)	(42)	(51)
Azerbaijan				Russia			
1991	154	948	958	1991	9,375	51,886	46,875
1992	113	850	812	1992	8,260	47,236	42,902
1993	93	798	584	1993	7,513	46,524	40,297
1994	85	784	494	1994	6,803	42,176	37,477
1995	76	827	456	1995	5,796	39,200	33,800
1996	80	841	476	1996	5,350	36,000	31,500
% decline ²	(51)	(13)	(52)	% decline ²	(38)	(24)	(28)
Armenia				Tajikistan			
1991	85	412	485	1991	86	587	455
1992	67	395	244	1992	70	509	296
1993	46	398	189	1993	59	476	154
1994	46	415	191	1994	62	467	79
1995	49	428	198	1995	56	449	63
1996	50	441	200	1996	50	359	47
% decline ²	(46)	(4)	(61)	% decline ²	(42)	(39)	(90)
Belarus				Turkmenistan			
1991	1,065	6,812	3,718	1991	100	458	300
1992	950	5,885	3,502	1992	98	471	292
1993	820	5,584	3,514	1993	110	712	267
1994	743	5,510	3,400	1994	107	716	270
1995	657	5,070	3,373	1995	111	727	270
1996	604	4,817	3,508	1996	105	735	257
% decline ²	(38)	(26)	(9)	% decline ²	--	--	(14)
Georgia				Uzbekistan			
1991	137	562	638	1991	492	3,331	2,347
1992	113	470	297	1992	469	3,679	1,898
1993	104	433	243	1993	517	3,764	1,788
1994	108	430	251	1994	509	3,733	1,574
1995	124	476	269	1995	519	3,665	1,232
1996	149	526	315	1996	500	3,190	1,025
% decline ²	(24)	(23)	(62)	% decline ²	--	(4)	(56)
Kazakstan				Ukraine			
1991	1,524	5,555	4,075	1991	4,029	22,409	15,188
1992	1,258	5,265	3,565	1992	3,401	19,114	13,496
1993	1,312	5,577	3,288	1993	2,815	18,377	11,793
1994	1,207	5,296	2,629	1994	2,677	18,138	10,154
1995	985	4,619	1,841	1995	2,294	17,274	9,404
1996	835	3,790	1,290	1996	2,080	15,890	8,750
% decline ²	(35)	(17)	(55)	% decline ²	(43)	(23)	(38)
Kyrgyzstan				Baltics *			
1991	230	1,132	650	1991	898	5,749	2,555
1992	228	961	591	1992	769	4,819	1,931
1993	214	946	389	1993	553	4,032	1,345
1994	197	872	202	1994	429	3,669	1,433
1995	180	864	147	1995	399	3,474	1,523
1996	182	880	160	1996	420	3,400	1,600
% decline ²	(22)	(24)	(77)	% decline ²	(56)	(40)	(40)

* = estimated. _ = Not applicable. ¹ Carcass weight.² Percent of maximum decline, that is, the percent change of production in the "bottom" year compared to 1991. For some countries, which have not bottomed out, the year of maximum decline is 1996.

Not applicable in case of increased production.

Source: Statkom SNG, Goskomstat Rossii.

**Table 14 -- Input and output price changes,
livestock sector, Russia**

	1991	1992	1993	1994	1995	1996
<hr/>						
	--Percent change-- ¹					
Input prices						
All ag. inputs	93	1,523	969	321	222	75
Mixed feed	113	1,690	760	271	160	118
Output prices						
All farm products	63	845	712	204	235	40
Livestock products	60	520	940	220	260	na
All meats ²	55	460	1,163	186	219	30
Cattle	48	380	1,069	164	238	na
Hogs	51	624	1,245	201	225	na
Poultry	69	718	1,342	210	192	na
Milk	36	594	756	234	366	21
Eggs	16	735	973	316	202	na

¹ Percent change for the previous year.

² Without subsidies.

na = not available.

Sources: Sel'skoe khoz. Rossii; Tzeny v Rossii, 1995;
Ministry of Agriculture; Goskomstat Rossii.

**Table 15 -- Input and output price changes,
livestock sector, Ukraine**

	1991	1992	1993	1994	1995	1996
<hr/>						
	--Percent change-- ¹					
Input prices						
All ag. inputs	na	na	4,090	420	220	na
Mixed feed	na	na	5,280	290	420	na
Output prices						
All farm products	80	1,800	4,000	500	320	na
Livestock products	70	1,600	3,800	450	350	na
All meats ²	70	1,500	3,500	511	443	na
Cattle	na	na	na	na	na	na
Hogs	na	na	na	na	na	na
Poultry	na	na	na	na	na	na
Milk	50	1,700	4,300	448	383	na
Eggs	100	2,300	4,600	778	302	na

¹ Percent change for the previous year.

² Without subsidies.

na = not available.

Sources: Ukraina v tsifrakh, 1995; Sil'ske gospodarstvo, 1996.

Table 16 --Livestock sector, financial indicators, former state enterprises, Russia

Item	1985	1990	1991	1992	1993	1994	1995	1996
Cost of production per unit ¹								
	<i>Rubles</i>							
Per centner of cattle wgt. gain	290	344	585	5,291	49,592	260,071	738,000	1,267,000
Per centner of hog wgt. gain	223	261	488	5,909	55,321	263,850	789,000	1,419,000
Per centner of poultry wgt. gain	162	163	331	4,868	47,104	191,967	540,000	1,017,000
Per 1,000 eggs	63	70	130	1,947	17,787	75,356	210,000	387,000
Per centner of milk, whole	39	42	71	668	5,967	28,362	82,000	143,000
Farmgate price per centner (w/subsidies) ²								
Cattle	na	372	522	4,000	34,173	91,000	298,000	421,000
Hog	na	311	455	5,109	52,842	156,000	462,000	735,000
Poultry	na	253	451	4,800	53,336	168,000	500,000	746,000
Eggs (1,000)	na	108	239	2,648	25,110	97,000	272,000	442,000
Milk, whole	na	65	84	892	6,482	20,800	87,000	112,000
Farmgate price per centner (w/out subsidies) ²								
Cattle	na	372	522	2,412	28,000	71,000	273,000	381,000
Hog	na	311	455	3,318	44,000	130,000	413,000	611,000
Poultry	na	253	451	3,067	47,000	140,000	442,000	600,000
Eggs (1,000)	na	108	239	2,018	22,000	89,000	253,000	397,000
Milk	na	65	84	567	4,821	16,300	74,000	97,000
"Profitability" (w/subsidies) ³								
	<i>Percent</i>							
Cattle production	4.4	21.9	23.2	57.1	63.6	-15.8	-19.5	-48
Swine production	4.1	23.1	14.5	36.8	52.0	2	-3.5	-33
Poultry production	20.5	28.7	21.7	7.4	14.0	-7.4	-10.6	-23
Eggs	59.2	51.1	74.1	29.5	37.1	24.5	27	11
Milk, whole	20.9	56.2	16.7	30.8	7.8	-26.4	-1	-22
"Profitability" (w/out subsidies) ³								
Cattle production	na	22.0	24.0	-5.0	32.0	-34.3	-27.2	-53
Swine production	na	24.0	15.0	-11.0	27.0	-15.5	-15.5	-44
Poultry production	na	29.0	22.0	-31.0	-23.0	-22.8	-25	-38
Eggs	na	51.0	74.0	-1.0	19.0	13.4	19	-0.3
Milk, whole	na	56	17	-17	-19	-42	-12	-33
Inflation rate	--	5	93	2,564	840	215	131	22
Ruble/dollar exchange rate	--	19.3	59.1	222.7	933.8	2,203	4562.5	5125.9

na = Not available. -- = Not applicable. ¹ The prime cost of production (sebestoimost') per centner of weight gain in the state sector. ² Vyruchka (tsena realizatsiya). ³ The Russian term rentabil'nost' equals sales revenue from marketed output minus prime cost divided by the latter. Sources: Goskomstat Rossii; Russian Ministry of Agriculture and Food.

Table 17 --Livestock productivity and feed conversion indicators, selected NIS countries

	1980	1985	1990	1991	1992	1993	1994	1995	1996
Eggs per layer, state sector									
Russia	210	224	236	231	224	222	214	212	217
Ukraine	191	207	214	203	190	174	162	171	na
Kazakhstan	220	220	229	224	209	202	168	149	na
Milk per cow (kg)									
Russia	2,169	2,334	2,731	2,567	2,332	2,328	2,162	2,160	na
Ukraine	2,272	2,554	2,863	2,662	2,304	2,273	2,240	2,204	na
<i>State sector only</i>									
Russia	2,122	2,327	2,781	2,569	2,247	2,250	2,033	2,067	1,948
Ukraine	2,291	2,595	2,941	2,668	2,177	2,099	2,031	1,908	na
Kazakhstan	2,097	1,961	2,367	2,265	1,943	1,964	1,708	1,554	na
Annual meat output per cattle (kg) †									
Russia	56	60	74	70	66	64	66	63	64
Ukraine	61	65	79	76	70	61	66	60	61
Kazakhstan	56	56	72	74	62	69	69	68	70
Annual meat output per swine (kg) †									
Russia	71	76	87	83	79	77	74	75	74
Ukraine	65	72	79	73	66	63	60	58	55
Kazakhstan	63	69	88	85	73	75	65	58	56
Weight at time of sale to the state (kg)									
<i>Cattle</i>									
Russia	352	355	385	374	361	350	340	na	na
Ukraine	348	362	393	385	368	352	349	333	na
<i>State sector only</i>									
Russia	na	na	357	na	na	na	297	286	na
Ukraine	350	364	393	387	371	354	348	326	na
Weight at time of sale to the state (kg)									
<i>Swine</i>									
Russia	102	107	118	117	111	112	109	na	na
Ukraine	101	104	127	124	118	113	108	105	na
<i>State sector only</i>									
Russia	na	na	108	na	na	na	87	82	na
Ukraine	101	104	127	121	116	112	107	102	na
Feed use per centner of wgt. gain, (state sector, centner of feed units)									
<i>Cattle</i>									
Russia	13	13	14	15	16	17	19	18	na
Ukraine	na	na	14	15	16	17	18	na	na
Feed use per centner of wgt. gain, (state sector, centner of feed units)									
<i>Swine</i>									
Russia	9	9	8	9	10	11	13	13	na
Ukraine	na	na	10	11	13	15	17	na	na
Feed use per centner of milk produced, (state sector, centner of feed units)									
Russia	1.51	1.57	1.44	1.52	1.58	1.62	1.74	1.71	na
Ukraine	na	na	1.47	1.59	1.72	1.79	1.77	na	na
Births per 100 cows, (state sector, centner of feed units)									
Russia	77	79	82	79	78	75	72	73	70
Ukraine	na	na	88	86	82	79	78	na	na
Births per 100 swine, (state sector, centner of feed units)									
Russia	1,194	1,270	1,370	1,271	1,158	1,096	995	971	908
Ukraine	na	na	1,422	1,266	1,137	1,107	1,037	na	na

na = Not available. 1 centner = 100 kg.

† Calculated, output divided by beginning year inventories, carcass weight.

Sources: Narkhoz RF, 1990-1996; Statkom SNG; Proiz-ekon. pokazateli razvitiya APK Rossii, Minsel'khoz RF, 1995, 1996; Sots-ekon. polozhenie Rossii, 1995-1996; Ukraina v tsifrakh, 1995; Statistichi shornik Ukrainy, 1995.

Table 18 -- Private trade food grain prices in Russia, Ukraine, and Kazakhstan

Food wheat						Food rye			
	U.S. f.o.b. Gulf #2 HRW	Russia private trade ¹	Russia grain exchange ¹	Ukraine grain exchange ¹	Kazakhstan grain exchange ²	Russia private trade ¹	Russia grain exchange ¹	Ukraine grain exchange ¹	Kazakhstan grain exchange ²
	\$ / ton					\$ / ton			
1996									
Jan	\$205	\$203	na	na	\$171	\$149	\$139	na	na
Feb	\$217	\$200	na	na	\$172	\$152	\$141	na	na
Mar	\$214	\$210	na	\$139	\$167	\$158	\$138	na	na
Apr	\$248	\$223	na	\$142	na	\$162	\$148	na	na
May	\$259	\$231	na	\$153	na	\$160	\$160	na	na
Jun	\$225	\$216	na	na	na	\$157	\$161	na	na
Jul	\$201	\$188	na	na	na	\$159	\$156	na	na
Aug	\$190	\$217	\$217	na	na	\$164	\$147	na	na
Sep	\$177	\$200	\$204	na	na	\$157	\$148	na	na
Oct	\$177	\$208	\$220	na	na	\$147	\$156	na	na
Nov	\$174	\$212	\$202	\$195	\$165	\$147	\$156	\$145	na
Dec	\$174	\$204	\$200	\$190	\$165	\$146	\$145	\$148	\$100
Avg	\$205	\$209	na	na	na	\$155	\$150	na	na
1997									
Jan	\$174	\$200	\$197	\$190	\$167	\$144	\$143	\$148	\$100
Feb	\$171	\$201	\$196	\$190	\$165	\$143	\$143	\$155	\$105
Mar	na	\$197	\$193	\$190	\$165	\$140	\$140	\$155	\$108
Apr	na	\$191	\$191	\$190	na	\$139	\$139	\$155	na

na = Not available.

¹ Includes 20 percent value-added tax (VAT); ² Includes 30 percent value-added tax (VAT).

Sources: U.S. prices: USDA; Russian prices: OGO, Moscow and Russian Ministry of Agriculture;
 Ukrainian prices: Ukrainian Agricultural Exchange and Burgas, Kiev;
 Kazak prices: International Kazakhstan Commodity Exchange and Dalel, Almaty.

Table 19 -- Private trade feed grain prices in Russia, Ukraine, and Kazakhstan

Feed wheat					Feed barley		
	Russia private trade ¹	Ukraine grain exchange ¹	Kazakhstan grain exchange ²		Russia private trade ¹	Russia grain exchange ¹	Ukraine grain exchange ¹
	\$/ton				\$/ton		
1996							
Jan	\$136	na	na		\$128	\$132	na
Feb	\$137	na	na		\$129	\$132	na
Mar	\$150	\$122	na		\$138	\$130	\$108
Apr	\$164	\$129	na		\$149	\$142	na
May	\$168	na	na		\$147	\$150	\$130
Jun	\$159	na	na		\$144	\$147	na
Jul	\$144	na	na		\$143	\$148	na
Aug	\$147	na	na		\$141	\$151	na
Sep	\$139	na	na		\$137	\$148	na
Oct	\$132	na	na		\$128	\$156	na
Nov	\$132	\$160	\$110		\$128	\$156	\$150
Dec	\$130	\$155	\$100		\$125	\$155	\$150
Avg	\$145	na	na		\$136	\$146	na
1997							
Jan	\$129	\$155	\$100		na	\$152	\$148
Feb	\$129	\$150	\$100		na	\$152	\$145
Mar	\$126	\$160	\$107		na	\$149	\$145
Apr	\$125	\$160	na		na	\$148	\$150
Feed corn					Feed oats		
	U.S. f.o.b. Gulf	Russia private trade ¹	Russia grain exchange ¹	Ukraine grain exchange ¹	Kazakhstan grain exchange ²	Russia grain exchange ¹	
	\$/ton					\$/ton	
1996							
Jan	\$158	\$171	\$160	na	na	\$117	
Feb	\$164	\$173	\$168	na	na	\$130	
Mar	\$171	\$198	\$155	\$143	na	\$128	
Apr	\$188	\$243	\$162	\$147	na	\$146	
May	\$203	\$240	\$180	na	na	\$152	
Jun	\$196	\$235	\$194	na	na	\$149	
Jul	\$197	\$240	\$190	na	na	\$140	
Aug	\$182	\$236	\$170	na	na	\$132	
Sep	\$145	\$213	\$167	na	na	\$130	
Oct	\$128	\$202	\$183	na	na	\$143	
Nov	\$118	\$202	\$183	\$170	\$155	\$143	
Dec	\$117	\$198	\$181	\$165	\$173	\$142	
Avg	\$164	\$213	\$174	na	na	\$138	
1997							
Jan	\$118	\$194	\$179	\$155	na	\$140	
Feb	\$121	\$193	\$179	\$165	\$144	\$121	
Mar	na	\$189	\$175	\$165	\$144	\$119	
Apr	na	\$188	\$174	\$168	na	\$118	

na = Not available.

¹ Includes 20 percent value-added tax (VAT); ² Includes 30 percent value-added tax (VAT).

Sources: U.S. prices: USDA; Russian prices: OGO, Moscow and Russian Ministry of Agriculture;

Ukrainian prices: Ukrainian Agricultural Exchange and Burgas, Kiev;

Kazak prices: International Kazakhstan Commodity Exchange and Dalel, Almaty.

Table 20 -- Supply and use of grain, NIS/B countries¹

	Beg. stocks	Product. ²	Mkt yr imports ³	Total supply	Mkt. yr. exports ³	Tot. dom. consump.	Feed & res.	Waste	Feed	Food use	Seed use	Ind. use	Ending stocks
<i>1,000 tons</i>													
Barley													
1991/92	4,025	41,508	5,878	51,411	570	48,793	39,451	2,688	36,763	117	7,105	2,120	2,048
1992/93	2,048	52,406	4,592	59,046	2,210	53,228	43,313	4,528	38,785	118	7,642	2,155	3,608
1993/94	3,608	55,014	1,464	60,086	1,031	53,488	43,462	4,060	39,402	118	7,783	2,125	5,567
1994/95	5,567	53,096	1,656	60,319	2,264	51,458	41,983	3,682	38,301	118	7,416	1,941	6,597
1995/96	6,597	32,864	1,400	40,861	1,000	36,937	28,882	1,978	26,904	118	6,370	1,567	2,924
1996/97 ⁴	2,924	29,838	875	33,637	600	31,055	23,236	1,820	21,416	118	6,179	1,522	1,982
1997/98 ⁵	1,982	31,625	955	34,562	700	31,595	23,666	1,904	21,762	118	6,229	1,582	2,267
Corn													
1991/92	2,951	9,779	12,710	25,440	510	22,525	20,043	587	19,456	565	1,175	742	2,405
1992/93	2,405	7,109	6,177	15,691	220	13,314	10,962	569	10,393	565	1,044	743	2,157
1993/94	2,157	8,927	4,195	15,279	150	12,262	10,050	714	9,336	565	1,040	607	2,867
1994/95	2,867	4,037	609	7,513	41	6,366	4,565	283	4,282	414	945	442	1,106
1995/96	1,106	7,010	490	8,606	255	6,632	4,629	421	4,208	434	1,085	484	1,719
1996/97 ⁴	1,719	4,535	600	6,854	50	5,617	3,475	272	3,203	549	1,113	480	1,187
1997/98 ⁵	1,187	7,335	490	9,012	450	6,240	4,185	440	3,745	454	1,121	480	2,322
Millet													
1991/92	0	1,613	0	1,613	0	1,613	663	97	566	400	550	0	0
1992/93	0	2,208	0	2,208	0	2,208	1,308	199	1,109	400	500	0	0
1993/94	0	1,650	0	1,650	0	1,650	906	116	791	400	344	0	0
1994/95	0	785	0	785	0	785	190	47	143	350	245	0	0
1995/96	0	798	0	798	0	798	365	48	317	250	183	0	0
1996/97 ⁴	0	750	0	750	0	750	335	38	298	200	215	0	0
1997/98 ⁵	0	850	0	850	0	850	425	43	383	200	225	0	0
Oats													
1991/92	459	12,856	100	13,415	0	13,037	10,441	900	9,541	105	2,415	76	378
1992/93	378	14,130	0	14,508	0	14,066	11,483	1,272	10,211	101	2,406	76	442
1993/94	442	15,017	0	15,459	0	13,931	11,352	1,051	10,301	101	2,402	76	1,528
1994/95	1,528	14,064	0	15,592	0	13,611	11,042	844	10,198	201	2,292	76	1,981
1995/96	1,981	10,910	50	12,941	0	12,244	10,218	655	9,563	63	1,887	76	697
1996/97 ⁴	697	10,312	0	11,009	0	10,516	8,293	722	7,571	361	1,786	76	493
1997/98 ⁵	493	9,334	0	9,827	0	9,488	7,262	653	6,609	369	1,781	76	339
Rye													
1991/92	4,308	14,679	1,150	20,137	350	16,814	8,134	1,028	7,106	5,717	2,856	107	2,973
1992/93	2,973	19,433	1,455	23,861	450	19,124	10,654	1,749	8,905	5,897	2,466	107	4,287
1993/94	4,287	14,979	440	19,706	310	15,723	7,469	1,049	6,420	6,241	1,906	107	3,673
1994/95	3,673	9,850	522	14,045	378	10,893	2,552	591	1,961	6,348	1,886	107	2,774
1995/96	2,774	7,829	445	11,048	170	9,837	2,097	470	1,627	5,953	1,680	107	1,041
1996/97 ⁴	1,041	9,473	355	10,869	350	9,688	2,089	474	1,615	5,740	1,751	108	831
1997/98 ⁵	831	8,673	290	9,794	225	8,895	1,413	434	979	5,753	1,621	108	674
Wheat													
1991/92	30,272	72,028	24,175	126,475	2,180	98,621	49,052	5,042	44,010	35,254	12,210	2,105	25,674
1992/93	25,674	89,714	24,503	139,891	6,800	102,329	52,544	8,074	44,470	35,826	11,789	2,170	30,762
1993/94	30,762	83,413	13,620	127,795	6,500	89,320	41,041	5,839	35,202	35,179	11,150	1,950	31,975
1994/95	31,975	60,698	7,842	100,515	3,952	76,734	30,493	3,642	26,851	33,355	11,051	1,835	19,829
1995/96	19,829	60,282	8,900	89,011	4,320	73,448	27,201	3,617	23,584	33,202	11,210	1,835	11,243
1996/97 ⁴	11,243	64,326	6,045	81,614	3,450	70,386	22,896	3,860	19,036	34,510	11,165	1,815	7,778
1997/98 ⁵	7,778	69,290	6,390	83,458	4,850	69,650	20,185	4,157	16,028	36,370	11,280	1,815	8,958
Total coarse grains⁶													
1991/92	11,743	80,435	19,838	112,016	1,430	102,782	78,732	5,299	73,433	6,904	14,101	3,045	7,804
1992/93	7,804	95,286	12,224	115,314	2,880	101,940	77,720	8,316	69,404	7,081	14,058	3,081	10,494
1993/94	10,494	95,587	6,099	112,180	1,491	97,054	73,239	6,989	66,250	7,425	13,475	2,915	13,635
1994/95	13,635	81,832	2,787	98,254	2,683	83,113	60,332	5,447	54,885	7,431	12,784	2,566	12,458
1995/96	12,458	59,411	2,385	74,254	1,425	66,448	46,191	3,571	42,620	6,818	11,205	2,234	6,381
1996/97 ⁴	6,381	54,908	1,830	63,119	1,000	57,626	37,428	3,325	34,103	6,968	11,044	2,186	4,493
1997/98 ⁵	4,493	57,817	1,735	64,045	1,375	57,068	36,951	3,474	33,477	6,894	10,977	2,246	5,602
Total grains⁷													
1991/92	42,015	152,463	44,013	238,491	3,610	201,403	127,784	10,341	117,443	42,158	26,311	5,150	33,478
1992/93	33,478	185,000	36,727	255,205	9,680	204,269	130,264	16,390	113,874	42,907	25,847	5,251	41,256
1993/94	41,256	179,000	19,719	239,975	7,991	186,374	114,280	12,828	101,452	42,604	24,625	4,865	45,610
1994/95	45,610	142,530	10,629	198,769	6,635	159,847	90,825	9,088	81,737	40,786	23,835	4,401	32,287
1995/96	32,287	119,693	11,285	163,265	5,745	139,896	73,392	7,188	66,204	40,020	22,415	4,069	17,624
1996/97 ⁴	17,624	119,234	7,875	144,733	4,450	128,012	60,324	7,185	53,139	41,478	22,209	4,001	12,271
1997/98 ⁵	12,271	127,107	8,125	147,503	6,225	126,718	57,136	7,631	49,505	43,264	22,257	4,061	14,560

¹ NIS and Baltics includes the 15 countries of the former Soviet Union. ² In cleanweight. ³ Includes intra- and extra-FSU trade.⁴ Preliminary. ⁵ Projection. ⁶ Includes barley, corn, millet, oats, and rye. ⁷ Wheat and coarse grains only.

Source: USDA, estimates as of May 1997.

Table 21 -- Supply and use of grain, Russia

	Beg. stocks	Product. ¹	Mkt yr imports ²	Total supply	Mkt. yr. exports ²	Tot. dom. consump.	Feed & res.	Waste	Feed	Food use	Seed use	Ind. use	Ending stocks
1,000 tons													
Barley													
1991/92	865	22,174	2,890	25,929	105	25,635	20,285	1,552	18,733	50	4,100	1,200	189
1992/93	189	26,989	2,270	29,448	100	28,368	22,718	2,699	20,019	50	4,400	1,200	980
1993/94	980	26,900	400	28,280	185	27,041	21,291	1,883	19,408	50	4,500	1,200	1,054
1994/95	1,054	27,000	584	28,638	1,500	24,710	19,060	1,620	17,440	50	4,500	1,100	2,428
1995/96	2,428	15,800	800	19,028	300	18,202	13,545	948	12,597	50	3,807	800	526
1996/97 ³	526	15,900	300	16,726	500	15,900	11,400	954	10,446	50	3,700	750	326
1997/98 ⁴	326	16,500	250	17,076	500	16,100	11,500	990	10,510	50	3,750	800	476
Corn													
1991/92	1,578	1,969	8,225	11,772	300	10,238	9,038	138	8,900	500	300	400	1,234
1992/93	1,234	2,135	4,240	7,609	100	6,214	5,114	214	4,900	500	200	400	1,296
1993/94	1,296	2,447	3,300	7,043	80	5,771	4,671	171	4,500	500	300	300	1,191
1994/95	1,191	900	218	2,309	0	2,154	1,304	54	1,250	350	300	200	155
1995/96	155	1,700	100	1,955	0	1,800	965	102	863	335	300	200	155
1996/97 ³	155	1,100	200	1,455	0	1,300	365	66	299	435	300	200	155
1997/98 ⁴	155	1,800	100	2,055	0	1,800	960	108	852	340	300	200	255
Millet													
1991/92	0	1,040	0	1,040	0	1,040	340	73	267	400	300	0	0
1992/93	0	1,535	0	1,535	0	1,535	835	154	681	400	300	0	0
1993/94	0	1,124	0	1,124	0	1,124	524	79	445	400	200	0	0
1994/95	0	500	0	500	0	500	50	30	20	350	100	0	0
1995/96	0	500	0	500	0	500	200	30	170	250	50	0	0
1996/97 ³	0	600	0	600	0	600	300	30	270	200	100	0	0
1997/98 ⁴	0	600	0	600	0	600	300	30	270	200	100	0	0
Oats													
1991/92	419	10,372	100	10,891	0	10,526	8,326	726	7,600	50	2,100	50	365
1992/93	365	11,241	0	11,606	0	11,224	9,024	1,124	7,900	50	2,100	50	382
1993/94	382	11,600	0	11,982	0	10,769	8,569	750	7,819	50	2,100	50	1,213
1994/95	1,213	10,700	0	11,913	0	10,295	8,095	645	7,450	150	2,000	50	1,618
1995/96	1,618	8,600	50	10,268	0	9,850	8,200	545	7,655	0	1,600	50	418
1996/97 ³	418	8,300	0	8,718	0	8,400	6,550	600	5,950	300	1,500	50	318
1997/98 ⁴	318	7,000	0	7,318	0	7,200	5,350	600	4,750	300	1,500	50	118
Rye													
1991/92	3,384	10,624	390	14,398	150	11,894	6,244	744	5,500	3,400	2,200	50	2,354
1992/93	2,354	13,887	675	16,916	200	13,339	7,889	1,389	6,500	3,600	1,800	50	3,378
1993/94	3,378	9,151	0	12,529	210	9,791	4,641	641	4,000	3,800	1,300	50	2,528
1994/95	2,528	6,000	0	8,528	278	6,210	860	360	500	4,000	1,300	50	2,040
1995/96	2,040	4,100	100	6,240	100	5,700	550	246	304	3,950	1,150	50	440
1996/97 ³	440	5,900	100	6,440	200	6,000	725	295	430	4,000	1,225	50	240
1997/98 ⁴	240	5,000	100	5,340	50	5,200	50	50	0	4,000	1,100	50	90
Wheat													
1991/92	16,380	38,900	13,645	68,925	555	53,823	29,723	2,723	27,000	15,700	7,500	900	14,547
1992/93	14,547	46,170	14,470	75,187	900	56,617	32,617	4,617	28,000	15,800	7,200	1,000	17,670
1993/94	17,670	43,500	5,000	66,170	500	48,945	26,045	3,045	23,000	15,500	6,600	800	16,725
1994/95	16,725	32,100	1,900	50,725	385	42,646	20,426	1,926	18,500	15,000	6,520	700	7,694
1995/96	7,694	30,100	4,200	41,994	100	39,420	17,920	1,806	16,114	14,300	6,500	700	2,474
1996/97 ³	2,474	34,900	1,750	39,124	600	36,850	14,650	1,920	12,731	15,000	6,500	700	1,674
1997/98 ⁴	1,674	35,000	2,000	38,674	600	36,000	13,000	1,925	11,075	15,800	6,500	700	2,074
Total coarse grains⁵													
1991/92	6,246	46,179	11,605	64,030	555	59,333	44,233	3,233	41,000	4,400	9,000	1,700	4,142
1992/93	4,142	55,787	7,185	67,114	400	60,679	45,579	5,579	40,000	4,600	8,800	1,700	6,035
1993/94	6,035	51,222	3,700	60,957	475	54,496	39,696	3,524	36,172	4,800	8,400	1,600	5,986
1994/95	5,986	45,100	802	51,888	1,778	43,869	29,369	2,709	26,660	4,900	8,200	1,400	6,241
1995/96	6,241	30,700	1,050	37,991	400	36,052	23,460	1,871	21,589	4,585	6,907	1,100	1,539
1996/97 ³	1,539	31,800	600	33,939	700	32,200	19,340	1,945	17,395	4,985	6,825	1,050	1,039
1997/98 ⁴	1,039	30,900	450	32,389	550	30,900	18,160	1,778	16,382	4,890	6,750	1,100	939
Total grains⁶													
1991/92	22,626	85,079	25,250	132,955	1,110	113,156	73,956	5,956	68,000	20,100	16,500	2,600	18,689
1992/93	18,689	101,957	21,655	142,301	1,300	117,296	78,196	10,196	68,000	20,400	16,000	2,700	23,705
1993/94	23,705	94,722	8,700	127,127	975	103,441	65,741	6,569	59,172	20,300	15,000	2,400	22,711
1994/95	22,711	77,200	2,702	102,613	2,163	86,515	49,795	4,635	45,160	19,900	14,720	2,100	13,935
1995/96	13,935	60,800	5,250	79,985	500	75,472	41,380	3,677	37,703	18,885	13,407	1,800	4,013
1996/97 ³	4,013	66,700	2,350	73,063	1,300	69,050	33,990	3,865	30,126	19,985	13,325	1,750	2,713
1997/98 ⁴	2,713	65,900	2,450	71,063	1,150	66,900	31,160	3,703	27,457	20,690	13,250	1,800	3,013

¹ Production is in cleanweight. ² Includes intra-FSU and extra-FSU trade. ³ Preliminary.⁴ Projection. ⁵ Includes barley, corn, millet, oats, and rye. ⁶ Wheat and coarse grains only.

Source: USDA, estimates as of May 1997.

Table 22 -- Supply and use of grain, Ukraine

	Beg. stocks	Product. ¹	Mkt yr imports ²	Total supply	Mkt. yr. exports ²	Tot. dom. consump.	Feed & res.	Waste	Feed	Food use	Seed use	Ind. use	Ending stocks
1,000 tons													
Barley													
1991/92	720	8,047	435	9,202	275	8,306	6,681	402	6,279	25	1,200	400	621
1992/93	621	10,106	325	11,052	180	10,319	8,594	606	7,988	25	1,300	400	552
1993/94	552	13,550	0	14,102	275	11,729	9,904	1,084	8,820	25	1,400	400	2,098
1994/95	2,098	14,508	0	16,606	190	14,326	12,843	1,306	11,537	25	1,058	400	2,090
1995/96	2,090	9,633	0	11,723	200	10,133	8,790	578	8,212	25	968	350	1,390
1996/97 ³	1,390	5,700	0	7,090	100	6,400	5,060	285	4,775	25	965	350	590
1997/98 ⁴	590	7,500	0	8,090	200	7,000	5,650	375	5,275	25	965	360	890
Corn													
1991/92	563	4,747	820	6,130	150	5,587	4,687	237	4,450	50	650	200	393
1992/93	393	2,851	300	3,544	100	3,171	2,321	171	2,150	50	600	200	273
1993/94	273	3,786	175	4,234	50	3,308	2,552	303	2,249	50	506	200	876
1994/95	876	1,537	25	2,438	0	2,176	1,539	123	1,416	50	437	150	262
1995/96	262	3,392	0	3,654	50	2,779	1,950	204	1,746	50	579	200	825
1996/97 ³	825	1,900	0	2,725	0	2,300	1,450	95	1,355	50	600	200	425
1997/98 ⁴	425	3,500	0	3,925	200	2,300	1,450	175	1,275	50	600	200	1,425
Millet													
1991/92	0	338	0	338	0	338	238	17	221	0	100	0	0
1992/93	0	226	0	226	0	226	126	14	112	0	100	0	0
1993/94	0	294	0	294	0	294	200	24	176	0	94	0	0
1994/95	0	155	0	155	0	155	60	9	51	0	95	0	0
1995/96	0	258	0	258	0	258	160	15	145	0	98	0	0
1996/97 ³	0	100	0	100	0	100	20	6	14	0	80	0	0
1997/98 ⁴	0	200	0	200	0	200	110	12	98	0	90	0	0
Oats													
1991/92	40	945	0	985	0	972	847	47	800	25	100	0	13
1992/93	13	1,246	0	1,259	0	1,200	1,075	75	1,000	25	100	0	59
1993/94	59	1,479	0	1,538	0	1,224	1,120	120	1,000	25	79	0	314
1994/95	314	1,385	0	1,699	0	1,337	1,227	110	1,117	25	85	0	362
1995/96	362	1,116	0	1,478	0	1,200	1,100	70	1,030	25	75	0	278
1996/97 ³	278	700	0	978	0	800	700	70	630	25	75	0	178
1997/98 ⁴	178	1,000	0	1,178	0	950	850	70	780	25	75	0	228
Rye													
1991/92	287	981	280	1,548	0	1,299	99	49	50	1,100	100	0	249
1992/93	249	1,156	300	1,705	0	1,319	119	69	50	1,100	100	0	386
1993/94	386	1,180	150	1,716	0	1,276	146	94	52	1,080	50	0	439
1994/95	439	941	123	1,503	50	1,173	122	49	73	1,001	50	0	280
1995/96	280	1,208	25	1,513	25	1,250	50	50	0	1,100	100	0	238
1996/97 ³	238	1,100	25	1,363	125	1,000	50	50	0	850	100	0	238
1997/98 ⁴	238	1,100	10	1,348	125	1,000	50	50	0	850	100	0	223
Wheat													
1991/92	7,514	21,155	1,100	29,769	225	22,969	12,469	1,269	11,200	7,800	2,000	700	6,575
1992/93	6,575	19,508	1,225	27,308	100	21,820	11,370	1,170	10,200	7,900	1,900	650	5,387
1993/94	5,387	21,831	100	27,318	500	19,210	8,810	1,310	7,500	7,900	1,850	650	7,608
1994/95	7,608	13,857	275	21,740	27	15,845	5,390	970	4,420	7,955	1,850	650	5,868
1995/96	5,868	16,273	10	22,151	1,100	16,000	5,200	814	4,386	8,150	1,950	700	5,051
1996/97 ³	5,051	13,500	200	18,751	500	16,200	5,000	810	4,190	8,500	2,000	700	2,051
1997/98 ⁴	2,051	17,500	50	19,601	1,000	16,200	4,275	1,050	3,225	9,125	2,100	700	2,401
Total coarse grains⁵													
1991/92	1,610	15,058	1,535	18,203	425	16,503	12,553	753	11,800	1,200	2,150	600	1,275
1992/93	1,275	15,585	925	17,785	280	16,236	12,236	936	11,300	1,200	2,200	600	1,269
1993/94	1,269	20,289	325	21,883	325	17,831	13,922	1,625	12,297	1,180	2,129	600	3,727
1994/95	3,727	18,526	148	22,401	240	19,167	15,791	1,597	14,194	1,101	1,725	550	2,994
1995/96	2,994	15,607	25	18,626	275	15,620	12,050	917	11,133	1,200	1,820	550	2,731
1996/97 ³	2,731	9,500	25	12,256	225	10,600	7,280	506	6,775	950	1,820	550	1,431
1997/98 ⁴	1,431	13,300	10	14,741	525	11,450	8,110	682	7,429	950	1,830	560	2,766
Total grains⁶													
1991/92	9,124	36,213	2,635	47,972	650	39,472	25,022	2,022	23,000	9,000	4,150	1,300	7,850
1992/93	7,850	35,093	2,150	45,093	380	38,056	23,606	2,106	21,500	9,100	4,100	1,250	6,657
1993/94	6,657	42,120	425	49,202	825	37,041	22,732	2,935	19,797	9,080	3,979	1,250	11,336
1994/95	11,336	32,383	423	44,142	267	35,012	21,181	2,567	18,614	9,056	3,575	1,200	8,863
1995/96	8,863	31,880	35	40,778	1,375	31,620	17,250	1,730	15,520	9,350	3,770	1,250	7,783
1996/97 ³	7,783	23,000	225	31,008	725	26,800	12,280	1,316	10,965	9,450	3,820	1,250	3,483
1997/98 ⁴	3,483	30,800	60	34,343	1,525	27,650	12,385	1,732	10,654	10,075	3,930	1,260	5,168

¹ Production is in cleanweight. ² Includes intra-FSU and extra-FSU trade. ³ Preliminary.

⁴ Projection. ⁵ Includes barley, corn, millet, oats, and rye. ⁶ Wheat and coarse grains only.

Source: USDA, estimates as of May 1997.

Table 23 -- Supply and use of grain, Kazakhstan

	Beg. stocks	Product. ¹	Mkt yr imports ²	Total supply	Mkt. yr. exports ²	Tot. dom. consump.	Feed & res.	Waste	Feed	Food use	Seed use	Ind. use	Ending stocks
1,000 tons													
Barley													
1991/92	1,375	3,085	0	4,460	150	4,222	3,192	154	3,038	5	925	100	88
1992/93	88	8,511	0	8,599	1,900	5,557	4,352	766	3,586	5	1,050	150	1,142
1993/94	1,142	7,149	0	8,291	550	6,482	5,276	572	4,704	6	1,050	150	1,259
1994/95	1,259	5,100	0	6,359	574	5,009	3,879	357	3,522	5	1,000	125	776
1995/96	776	2,178	0	2,954	500	2,271	1,421	131	1,290	5	745	100	183
1996/97 ³	183	2,700	0	2,883	0	2,650	1,850	216	1,634	5	695	100	233
1997/98 ⁴	233	2,500	0	2,733	0	2,600	1,800	200	1,600	5	695	100	133
Corn													
1991/92	117	330	495	942	0	891	817	17	801	0	50	24	51
1992/93	51	368	165	584	0	508	433	33	400	0	50	25	76
1993/94	76	355	50	481	0	403	328	28	300	0	50	25	77
1994/95	77	230	0	307	0	291	216	16	200	0	50	25	16
1995/96	16	158	0	174	5	153	83	9	74	0	45	25	16
1996/97 ³	16	120	0	136	0	130	60	7	53	0	45	25	6
1997/98 ⁴	6	170	0	176	0	160	85	10	75	0	50	25	16
Millet													
1991/92	0	235	0	235	0	235	85	12	73	0	150	0	0
1992/93	0	447	0	447	0	447	347	40	307	0	100	0	0
1993/94	0	232	0	232	0	232	182	19	163	0	50	0	0
1994/95	0	130	0	130	0	130	80	9	71	0	50	0	0
1995/96	0	40	0	40	0	40	5	2	3	0	35	0	0
1996/97 ³	0	50	0	50	0	50	15	3	12	0	35	0	0
1997/98 ⁴	0	50	0	50	0	50	15	3	12	0	35	0	0
Oats													
1991/92	0	231	0	231	0	231	176	12	164	5	50	0	0
1992/93	0	727	0	727	0	727	672	65	607	5	50	0	0
1993/94	0	802	0	802	0	802	747	64	683	5	50	0	0
1994/95	0	900	0	900	0	900	845	63	782	5	50	0	0
1995/96	0	240	0	240	0	240	185	12	173	5	50	0	0
1996/97 ³	0	270	0	270	0	270	215	75	140	5	50	0	0
1997/98 ⁴	0	300	0	300	0	300	240	75	165	10	50	0	0
Rye													
1991/92	183	480	150	813	0	764	274	24	250	390	100	0	49
1992/93	49	525	110	684	0	637	197	47	150	340	100	0	47
1993/94	47	835	0	882	0	707	267	67	200	340	100	0	175
1994/95	175	500	0	675	0	575	35	35	0	440	100	0	100
1995/96	100	140	0	240	20	190	10	7	3	140	40	0	30
1996/97 ³	30	90	0	120	0	110	10	5	6	65	35	0	10
1997/98 ⁴	10	100	0	110	0	100	5	5	0	65	30	0	10
Wheat													
1991/92	3,325	6,889	300	10,514	1,400	7,364	3,344	344	3,000	1,800	2,100	120	1,750
1992/93	1,750	18,285	125	20,160	5,800	9,569	5,329	1,829	3,500	2,050	2,050	140	4,791
1993/94	4,791	11,659	5	16,455	5,500	7,006	2,811	816	1,995	2,050	2,005	140	3,949
1994/95	3,949	9,052	2	13,003	3,500	5,973	2,046	543	1,503	1,900	1,902	125	3,530
1995/96	3,530	6,490	0	10,020	3,000	5,600	1,650	325	1,326	1,950	1,875	125	1,420
1996/97 ³	1,420	7,700	0	9,120	2,250	5,100	1,200	693	507	2,000	1,800	100	1,770
1997/98 ⁴	1,770	8,500	0	10,270	3,000	5,100	1,050	765	285	2,150	1,800	100	2,170
Total coarse grains⁵													
1991/92	1,675	4,361	645	6,681	150	6,343	4,544	219	4,326	400	1,275	124	188
1992/93	188	10,578	275	11,041	1,900	7,876	6,001	951	5,050	350	1,350	175	1,264
1993/94	1,264	9,373	50	10,687	550	8,626	6,800	750	6,050	351	1,300	175	1,511
1994/95	1,511	6,860	0	8,371	574	6,905	5,055	480	4,575	450	1,250	150	892
1995/96	892	2,756	0	3,648	525	2,894	1,704	162	1,542	150	915	125	229
1996/97 ³	229	3,230	0	3,459	0	3,210	2,150	306	1,844	75	860	125	249
1997/98 ⁴	249	3,120	0	3,369	0	3,210	2,145	293	1,852	80	860	125	159
Total grains⁶													
1991/92	5,000	11,250	945	17,195	1,550	13,708	7,889	563	7,326	2,200	3,375	244	1,937
1992/93	1,937	28,863	400	31,200	7,700	17,445	11,330	2,780	8,550	2,400	3,400	315	6,055
1993/94	6,055	21,032	55	27,142	6,050	15,632	9,611	1,566	8,045	2,401	3,305	315	5,460
1994/95	5,460	15,912	2	21,374	4,074	12,878	7,101	1,023	6,078	2,350	3,152	275	4,422
1995/96	4,422	9,246	0	13,668	3,525	8,494	3,354	486	2,868	2,100	2,790	250	1,649
1996/97 ³	1,649	10,930	0	12,579	2,250	8,310	3,350	999	2,351	2,075	2,660	225	2,019
1997/98 ⁴	2,019	11,620	0	13,639	3,000	8,310	3,195	1,058	2,137	2,230	2,660	225	2,329

¹ Production is in cleanweight. ² Includes intra-FSU and extra-FSU trade. ³ Preliminary.

⁴ Projection. ⁵ Includes barley, corn, millet, oats, and rye. ⁶ Wheat and coarse grains only.

Source: USDA, estimates as of May 1997.

Table 24 -- Supply and use of grain, Belarus

	Beg. stocks	Product. ¹	Mkt yr imports ²	Total supply	Mkt. yr. exports ²	Tot. dom. consump.	Feed & res.	Waste	Feed	Food use	Seed use	Ind. use	Ending stocks
1,000 tons													
Barley													
1991/92	386	3,032	475	3,893	40	3,482	3,032	182	2,850	0	350	100	371
1992/93	371	2,934	540	3,845	30	3,378	2,904	205	2,699	0	374	100	437
1993/94	437	3,165	350	3,952	0	3,467	3,022	222	2,800	0	345	100	486
1994/95	486	3,013	300	3,799	0	3,219	2,756	181	2,575	0	363	100	580
1995/96	580	2,300	200	3,080	0	2,750	2,250	138	2,112	0	400	100	330
1996/97 ³	330	2,500	100	2,930	0	2,600	2,110	175	1,935	0	390	100	330
1997/98 ⁴	330	2,400	200	2,930	0	2,600	2,110	168	1,942	0	390	100	330
Corn													
1991/92	95	0	1,200	1,295	0	1,175	1,150	0	1,150	0	0	25	120
1992/93	120	0	520	640	0	525	500	0	500	0	0	25	115
1993/94	115	0	100	215	0	150	150	0	150	0	0	0	65
1994/95	65	0	50	115	0	75	75	0	75	0	0	0	40
1995/96	40	0	70	110	0	70	70	0	70	0	0	0	40
1996/97 ³	40	0	50	90	0	50	50	0	50	0	0	0	40
1997/98 ⁴	40	0	50	90	0	50	50	0	50	0	0	0	40
Millet													
1991/92	0	0	0	0	0	0	0	0	0	0	0	0	0
1992/93	0	0	0	0	0	0	0	0	0	0	0	0	0
1993/94	0	0	0	0	0	0	0	0	0	0	0	0	0
1994/95	0	0	0	0	0	0	0	0	0	0	0	0	0
1995/96	0	0	0	0	0	0	0	0	0	0	0	0	0
1996/97 ³	0	0	0	0	0	0	0	0	0	0	0	0	0
1997/98 ⁴	0	0	0	0	0	0	0	0	0	0	0	0	0
Oats													
1991/92	0	760	0	760	0	760	635	46	589	0	100	25	0
1992/93	0	722	0	722	0	722	597	51	546	0	100	25	0
1993/94	0	871	0	871	0	871	725	53	672	0	121	25	0
1994/95	0	833	0	833	0	833	705	50	655	0	103	25	0
1995/96	0	700	0	700	0	700	575	45	530	0	100	25	0
1996/97 ³	0	700	0	700	0	700	575	45	530	0	100	25	0
1997/98 ⁴	0	700	0	700	0	700	575	45	530	0	100	25	0
Rye													
1991/92	277	1,962	0	2,239	200	1,879	1,229	118	1,111	275	325	50	160
1992/93	160	3,063	0	3,223	250	2,671	2,018	214	1,804	278	325	50	302
1993/94	302	2,901	0	3,203	100	2,789	2,038	203	1,835	376	325	50	314
1994/95	314	1,922	36	2,272	25	2,022	1,275	115	1,160	372	325	50	225
1995/96	225	2,000	0	2,225	25	1,975	1,300	120	1,180	325	300	50	225
1996/97 ³	225	1,900	0	2,125	25	1,875	1,100	133	967	425	300	50	225
1997/98 ⁴	225	1,900	0	2,125	50	1,875	1,100	133	967	425	300	50	200
Wheat													
1991/92	445	242	1,000	1,687	0	1,385	415	15	400	900	50	20	302
1992/93	302	330	950	1,582	0	1,288	273	23	250	945	50	20	294
1993/94	294	354	900	1,548	0	1,121	227	25	202	824	50	20	428
1994/95	428	250	550	1,228	0	938	223	18	205	645	50	20	290
1995/96	290	440	450	1,180	0	900	200	31	169	590	90	20	280
1996/97 ³	280	600	200	1,080	0	900	200	42	158	590	90	20	180
1997/98 ⁴	180	750	200	1,130	0	925	200	53	148	615	90	20	205
Total coarse grains⁵													
1991/92	758	5,754	1,675	8,187	240	7,296	6,046	346	5,700	275	775	200	651
1992/93	651	6,719	1,060	8,430	280	7,296	6,019	471	5,549	278	799	200	854
1993/94	854	6,937	450	8,241	100	7,277	5,935	478	5,457	376	791	175	864
1994/95	864	5,768	386	7,018	25	6,149	4,811	346	4,465	372	791	175	845
1995/96	845	5,000	270	6,115	25	5,495	4,195	303	3,892	325	800	175	595
1996/97 ³	595	5,100	150	5,845	25	5,225	3,835	353	3,482	425	790	175	595
1997/98 ⁴	595	5,000	250	5,845	50	5,225	3,835	346	3,489	425	790	175	570
Total grains⁶													
1991/92	1,203	5,996	2,675	9,874	240	8,680	6,460	360	6,100	1,175	825	220	954
1992/93	954	7,049	2,010	10,013	280	8,585	6,293	494	5,799	1,223	849	220	1,148
1993/94	1,148	7,291	1,350	9,789	100	8,397	6,161	502	5,659	1,200	841	195	1,292
1994/95	1,292	6,018	936	8,246	25	7,086	5,033	364	4,670	1,017	841	195	1,135
1995/96	1,135	5,440	720	7,295	25	6,395	4,395	334	4,061	915	890	195	875
1996/97 ³	875	5,700	350	6,925	25	6,125	4,035	395	3,640	1,015	880	195	775
1997/98 ⁴	775	5,750	450	6,975	50	6,150	4,035	399	3,637	1,040	880	195	775

¹ Production is in cleanweight. ² Includes intra-FSU and extra-FSU trade. ³ Preliminary.

⁴ Projection. ⁵ Includes barley, corn, millet, oats, and rye. ⁶ Wheat and coarse grains only.

Source: USDA, estimates as of May 1997.

Table 25 -- Supply and use of grain, Uzbekistan

	Beg. stocks	Product. ¹	Mkt yr imports ²	Total supply	Mkt. yr. exports ²	Tot. dom. consump.	Feed & res.	Waste	Feed	Food use	Seed use	Ind. use	Ending stocks
1,000 tons													
Barley													
1991/92	85	324	500	909	0	854	698	23	675	1	55	100	55
1992/93	55	380	300	735	0	683	527	27	500	1	55	100	53
1993/94	53	350	150	553	0	506	350	25	325	1	55	100	47
1994/95	47	385	150	582	0	526	430	27	403	1	55	40	56
1995/96	56	335	100	491	0	465	370	20	350	1	54	40	26
1996/97 ³	26	210	100	336	0	310	240	13	227	1	39	30	26
1997/98 ⁴	26	200	100	326	0	300	230	12	218	1	39	30	26
Corn													
1991/92	69	431	490	990	0	970	905	30	875	1	34	30	20
1992/93	20	408	200	628	0	594	529	29	500	1	34	30	34
1993/94	34	395	150	579	0	558	503	28	475	1	34	20	22
1994/95	22	230	20	272	0	245	220	16	204	1	14	10	27
1995/96	27	100	150	277	0	250	225	6	219	1	14	10	27
1996/97 ³	27	100	150	277	0	250	225	6	219	1	14	10	27
1997/98 ⁴	27	100	150	277	0	250	225	6	219	1	14	10	27
Millet													
1991/92	0	0	0	0	0	0	0	0	0	0	0	0	0
1992/93	0	0	0	0	0	0	0	0	0	0	0	0	0
1993/94	0	0	0	0	0	0	0	0	0	0	0	0	0
1994/95	0	0	0	0	0	0	0	0	0	0	0	0	0
1995/96	0	0	0	0	0	0	0	0	0	0	0	0	0
1996/97 ³	0	0	0	0	0	0	0	0	0	0	0	0	0
1997/98 ⁴	0	0	0	0	0	0	0	0	0	0	0	0	0
Oats													
1991/92	0	0	0	0	0	0	0	0	0	0	0	0	0
1992/93	0	0	0	0	0	0	0	0	0	0	0	0	0
1993/94	0	0	0	0	0	0	0	0	0	0	0	0	0
1994/95	0	0	0	0	0	0	0	0	0	0	0	0	0
1995/96	0	0	0	0	0	0	0	0	0	0	0	0	0
1996/97 ³	0	0	0	0	0	0	0	0	0	0	0	0	0
1997/98 ⁴	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye													
1991/92	25	8	10	43	0	24	1	1	0	22	1	0	19
1992/93	19	7	10	36	0	20	0	0	0	19	1	0	16
1993/94	16	7	5	28	0	14	0	0	0	13	1	0	13
1994/95	13	7	52	72	0	62	25	0	25	36	1	0	10
1995/96	10	7	5	22	0	13	6	0	6	6	1	0	9
1996/97 ³	9	7	5	21	0	12	6	0	6	5	1	0	9
1997/98 ⁴	9	7	5	21	0	14	6	0	6	7	1	0	8
Wheat													
1991/92	811	610	3,100	4,521	0	3,728	393	43	350	3,100	120	115	793
1992/93	793	950	3,200	4,943	0	4,057	667	67	600	3,155	120	115	887
1993/94	887	800	3,500	5,187	0	4,196	756	56	700	3,160	180	100	991
1994/95	991	1,350	2,000	4,341	0	3,740	570	95	476	2,820	250	100	601
1995/96	601	2,350	1,500	4,451	0	3,900	500	141	359	3,030	320	50	551
1996/97 ³	551	2,700	1,200	4,451	0	3,900	400	162	238	3,150	300	50	551
1997/98 ⁴	551	2,500	1,400	4,451	0	3,900	300	150	150	3,250	300	50	551
Total coarse grains⁵													
1991/92	179	763	1,000	1,942	0	1,847	1,603	53	1,550	24	90	130	95
1992/93	95	795	510	1,400	0	1,297	1,056	56	1,000	21	90	130	103
1993/94	103	752	305	1,160	0	1,078	853	53	800	15	90	120	82
1994/95	82	622	222	926	0	833	675	44	632	38	70	50	93
1995/96	93	442	255	790	0	728	601	27	574	8	69	50	62
1996/97 ³	62	317	255	634	0	572	471	19	452	7	54	40	62
1997/98 ⁴	62	307	255	624	0	564	461	18	443	9	54	40	60
Total grains⁶													
1991/92	990	1,373	4,100	6,463	0	5,575	1,996	96	1,900	3,124	210	245	888
1992/93	888	1,745	3,710	6,343	0	5,353	1,722	122	1,600	3,176	210	245	990
1993/94	990	1,552	3,805	6,347	0	5,274	1,609	109	1,500	3,175	270	220	1,073
1994/95	1,073	1,972	2,222	5,267	0	4,573	1,245	138	1,107	2,858	320	150	694
1995/96	694	2,792	1,755	5,241	0	4,628	1,101	168	933	3,038	389	100	613
1996/97 ³	613	3,017	1,455	5,085	0	4,472	871	181	690	3,157	354	90	613
1997/98 ⁴	613	2,807	1,655	5,075	0	4,464	761	168	593	3,259	354	90	611

¹ Production is in cleanweight. ² Includes intra-FSU and extra-FSU trade. ³ Preliminary.

⁴ Projection. ⁵ Includes barley, corn, millet, oats, and rye. ⁶ Wheat and coarse grains only.

Source: USDA, estimates as of May 1997.

Table 26 -- State grain procurements,
NIS countries

Country	1991	1993	1995	1996	1997 Plan
<i>1,000 tons</i>					
Russia	23,600	28,200	9,500	8,600	4,900
Federal	na	na	930	415	na
Regional	na	na	8,570	8,185	na
Ukraine	11,494	14,398	5,924	5,700	5,880
Belarus	1,085	1,824	1,729	1,750	na
Moldova	489	555	125	na	na
Kazakstan	3,449	6,930	800	1,100	1,000
Uzbekistan	571	1,109	1,993	na	na
Kyrgyzstan	165	283	11	na	na
Tajikistan	28	25	15 ¹	na	na
Turkmenistan	94	420	800 ¹	na	na
Armenia	59	32	30 ¹	na	na
Azerbaijan	303	324	291	na	na
Georgia	42	14	5 ¹	na	na
Total NIS	41,379	54,114	21,224	na	na
as percent of total output	26	29	17	na	na

¹ Estimate.

Sources: Statkom SNG, FBIS reports.

Table 27 -- Supply and use of major oilseeds, NIS/B region ¹

	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97
<i>1,000 tons</i>								
Total oilseeds								
Area	9,136	9,070	8,661	8,962	8,846	8,972	10,108	9,883
Yield	1.48	1.39	1.28	1.15	1.08	0.97	1.12	0.88
Production	13,492	12,605	11,076	10,315	9,590	8,693	11,286	8,648
Imports	1,075	813	500	564	401	449	602	387
Exports	264	404	698	589	1,064	1,073	2,120	1,560
Sunflowerseed								
Area	4,454	4,659	4,506	4,970	4,965	5,304	6,558	6,373
Yield	1.59	1.41	1.25	1.14	1.06	0.82	1.13	0.82
Production	7,064	6,554	5,631	5,655	5,261	4,368	7,380	5,212
Imports	194	168	65	106	43	25	222	122
Exports	140	210	365	371	760	713	1,821	1,375
Soybeans								
Area	828	821	806	784	733	658	545	562
Yield	1.15	1.07	0.99	0.81	0.81	0.74	0.66	0.73
Production	952	876	798	631	597	486	359	409
Imports	400	360	255	273	148	147	118	95
Exports	0	0	0	5	17	56	48	50
Cottonseed								
Area	3,338	3,171	3,008	2,888	2,883	2,706	2,573	2,545
Yield	1.52	1.50	1.44	1.28	1.22	1.33	1.28	1.09
Production	5,073	4,745	4,332	3,697	3,514	3,598	3,304	2,783
Imports	425	230	125	175	200	250	230	140
Exports	124	194	333	206	270	280	220	105
Total oilmeal								
Production	6,019	5,625	5,108	4,514	4,045	3,863	4,071	3,709
Imports	3,411	3,752	3,136	1,800	822	762	479	344
Exports	20	14	21	43	43	59	45	68
Consumption	9,410	9,363	8,223	6,270	4,825	4,531	4,458	4,047
Sunflowerseed meal								
Production	2,158	2,068	1,823	1,819	1,523	1,224	1,783	1,548
Imports	0	0	180	131	83	65	24	20
Exports	0	0	0	0	0	13	2	25
Consumption	2,158	2,068	2,003	1,950	1,606	1,241	1,758	1,605
Soybean meal								
Production	640	568	627	502	469	551	303	378
Imports	2,524	2,969	2,941	1,640	712	675	440	310
Exports	0	0	0	0	0	3	0	0
Consumption	3,164	3,537	3,568	2,141	1,182	1,223	743	688
Cottonseed meal								
Production	2,301	2,059	1,741	1,555	1,446	1,482	1,379	1,176
Imports	861	768	0	19	19	6	4	4
Exports	0	0	0	0	0	0	0	0
Consumption	3,162	2,827	1,741	1,574	1,465	1,488	1,383	1,180
Total vegetable oil								
Production	3,371	3,185	2,717	2,473	2,201	1,939	2,569	2,242
Imports	1,468	1,025	874	767	762	792	876	665
Exports	862	717	543	472	437	492	557	399
Consumption	3,880	3,380	3,227	2,846	2,542	2,320	2,740	2,592
Sunflowerseed oil								
Production	2,326	2,228	1,883	1,747	1,542	1,287	1,965	1,695
Imports	921	601	366	257	290	354	426	243
Exports	290	269	177	140	140	176	275	145
Consumption	2,860	2,448	2,254	1,944	1,706	1,549	1,961	1,885
Soybean oil								
Production	132	123	126	92	85	60	54	75
Imports	70	70	80	68	80	47	48	67
Exports	0	0	0	0	0	0	0	0
Consumption	202	192	203	158	167	111	109	135
Cottonseed oil								
Production	821	734	619	553	516	528	491	419
Imports	159	198	140	222	222	226	204	206
Exports	572	448	366	332	297	316	282	254
Consumption	408	484	393	443	441	438	413	370

¹ October/September marketing year (MY). Source: USDA/ERS.

As of May 1997.

Table 28 --Supply and use of major oilseeds, Russia

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ¹	1996/97 ²
Cottonseed 1,000 tons										
Cottonseed area ³	--	--	--	--	--	--	--	--	--	--
Cottonseed yield ⁴	--	--	--	--	--	--	--	--	--	--
Cottonseed production	--	--	--	--	--	--	--	--	--	--
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	--	--	--	--	--	--	--	--	--	--
Exports	--	--	--	--	--	--	--	--	--	--
Crush	--	--	--	--	--	--	--	--	--	--
Other use	--	--	--	--	--	--	--	--	--	--
Stocks	--	--	--	--	--	--	--	--	--	--
Rapeseed										
Rapeseed area	258	382	325	258	198	154	113	147	275	250
Rapeseed yield	0.73	0.70	0.82	1.00	0.91	1.07	0.85	0.83	0.45	0.52
Rapeseed production	188	267	267	258	181	165	96	122	125	130
Imports	--	--	--	--	--	--	--	3	1	--
Total supply	188	267	309	317	230	177	108	140	136	145
Exports	--	--	--	--	--	7	17	24	31	30
Crush	135	135	135	137	135	90	56	60	55	40
Other use	53	90	115	131	83	68	20	46	35	55
Stocks	--	42	59	49	12	12	15	10	15	20
Soybeans										
Soybean area	619	598	651	675	664	645	625	580	485	500
Soybean yield	0.87	1.13	1.13	1.06	0.94	0.78	0.80	0.73	0.60	0.70
Soybean production	540	675	738	717	624	505	497	421	290	350
Imports	425	200	200	180	75	167	68	35	31	5
Total supply	965	875	938	897	699	727	619	516	381	405
Exports	--	--	--	--	--	5	17	60	48	50
Crush	410	445	462	442	455	425	424	320	250	340
Other use	555	430	476	455	189	243	118	76	33	10
Stocks	--	--	--	--	55	54	60	60	50	5
Sunflowerseed										
Sunseed area	2,377	2,438	2,565	2,739	2,576	2,889	2,923	3,129	4,127	4,000
Sunseed yield	1.29	1.21	1.48	1.25	1.12	1.06	0.95	0.82	1.02	0.70
Sunseed production	3,067	2,958	3,789	3,427	2,895	3,073	2,765	2,553	4,200	2,800
Imports	3	--	--	--	--	93	30	10	5	5
Total supply	3,070	2,958	3,789	3,427	2,895	3,166	2,830	2,658	4,255	3,220
Exports	--	10	70	105	190	76	450	533	1,266	1,100
Crush	2,150	2,270	2,435	2,350	2,120	2,235	1,800	1,625	2,250	1,870
Other use	920	678	1,284	972	585	820	485	450	324	200
Stocks	--	--	--	--	--	35	95	50	415	50
Other oilseeds⁵										
Other oilseed area	330	330	330	336	278	232	144	136	258	250
Other oilseed yield	0.47	0.47	0.47	0.77	0.44	0.44	0.67	0.45	0.21	0.35
Other oilseed prod.	153	153	153	260	121	103	96	61	53	90
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	153	153	153	260	121	103	96	61	54	92
Exports	23	23	23	45	75	71	66	20	10	10
Crush	130	130	130	215	46	32	30	40	20	50
Other use	--	--	--	--	--	--	--	--	22	30
Stocks	--	--	--	--	--	--	--	1	2	2
Total oilseeds										
Total area	3,584	3,748	3,871	4,008	3,716	3,920	3,805	3,992	5,145	5,000
Total yield	1.10	1.08	1.28	1.16	1.03	0.98	0.91	0.79	0.91	0.67
Production	3,948	4,053	4,947	4,662	3,821	3,846	3,454	3,157	4,668	3,370
Imports	428	200	200	180	75	260	98	48	37	10
Total supply	4,376	4,253	5,189	4,901	3,945	4,173	3,653	3,375	4,826	3,862
Exports	23	33	93	150	265	159	550	637	1,355	1,190
Crush	2,825	2,980	3,162	3,144	2,756	2,782	2,310	2,045	2,575	2,300
Other use	1,528	1,198	1,875	1,558	857	1,131	623	572	414	295
Stocks	0	42	59	49	67	101	170	121	482	77

¹ Preliminary and estimated. ² USDA forecast.³ All area figures are in thousand hectares. ⁴ All yields are in thousand tons per hectare.⁵ Other oilseeds include mustardseed, flaxseed, and castor.

Table 29 --Supply and use of major oilseeds, Ukraine

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ¹	1996/97 ²
Cottonseed										
	1,000 tons									
Cottonseed area ³	--	--	--	--	--	--	--	--	--	--
Cottonseed yield ⁴	--	--	--	--	--	--	--	--	--	--
Cottonseed production	--	--	--	--	--	--	--	--	--	--
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	--	--	--	--	--	--	--	--	--	--
Exports	--	--	--	--	--	--	--	--	--	--
Crush	--	--	--	--	--	--	--	--	--	--
Other use	--	--	--	--	--	--	--	--	--	--
Stocks	--	--	--	--	--	--	--	--	--	--
Rapeseed										
Rapeseed area	56	84	70	65	67	54	54	23	20	15
Rapeseed yield	0.88	0.85	1.00	1.23	1.21	1.30	1.20	0.87	0.85	0.87
Rapeseed production	49	71	70	80	81	70	65	20	17	13
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	49	71	70	80	81	70	65	20	17	13
Exports	--	--	--	--	--	--	--	--	--	--
Crush	42	65	65	72	67	58	59	10	10	8
Other use	7	6	5	8	14	12	6	10	7	5
Stocks	--	--	--	--	--	--	--	--	--	--
Soybeans										
Soybean area	74	76	105	88	101	97	70	43	23	25
Soybean yield	1.15	1.32	1.13	1.13	1.34	0.78	0.88	0.70	1.30	0.80
Soybean production	85	101	124	99	135	76	60	30	30	20
Imports	200	200	200	180	180	60	30	20	20	20
Total supply	285	301	324	279	315	136	90	50	50	40
Exports	--	--	--	--	--	--	--	--	--	--
Crush	253	247	264	237	268	116	76	40	40	35
Other use	32	54	60	42	47	20	14	10	10	5
Stocks	--	--	--	--	--	--	--	--	--	--
Sunflowerseed										
Sunseed area	1,535	1,577	1,615	1,636	1,600	1,640	1,637	1,784	2,020	1,900
Sunseed yield	1.77	1.76	1.79	1.67	1.53	1.39	1.36	0.88	1.42	1.11
Sunseed production	2,716	2,775	2,885	2,725	2,448	2,277	2,226	1,570	2,850	2,100
Imports	--	--	--	--	--	--	--	--	200	100
Total supply	2,716	2,775	2,885	2,725	2,448	2,277	2,226	1,570	3,050	2,250
Exports	20	15	70	105	170	200	200	100	450	150
Crush	2,445	2,500	2,600	2,450	2,050	1,850	1,825	1,400	2,400	2,050
Other use	251	260	215	170	228	227	201	70	150	50
Stocks	0	0	0	0	0	0	0	0	50	0
Other oilseeds⁵										
Other oilseed area	100	105	120	110	50	30	15	11	11	11
Other oilseed yield	0.47	0.47	0.47	0.45	0.44	0.50	0.50	0.55	0.55	0.55
Other oilseed prod.	47	49	56	50	22	15	8	6	6	6
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	47	49	56	50	22	15	8	6	6	6
Exports	--	--	--	--	--	--	--	--	--	--
Crush	47	49	56	50	22	15	8	5	5	5
Other use	--	--	--	--	--	--	--	1	1	1
Stocks	--	--	--	--	--	--	--	--	--	--
Total oilseeds										
Total area	1,765	1,842	1,910	1,899	1,818	1,821	1,776	1,861	2,074	1,951
Total yield	1.64	1.63	1.64	1.56	1.48	1.34	1.33	0.87	1.40	1.10
Production	2,897	2,996	3,135	2,954	2,686	2,438	2,359	1,626	2,903	2,139
Imports	200	200	200	180	180	60	30	20	220	120
Total supply	3,982	3,196	3,335	3,134	2,866	2,498	2,389	1,646	3,123	2,309
Exports	20	15	70	105	170	200	200	100	450	150
Crush	2,787	2,861	2,985	2,809	2,407	2,039	1,968	1,455	2,455	2,098
Other use	290	320	280	220	289	259	221	91	171	61
Stocks	0	0	0	0	0	0	0	0	50	0

¹ Preliminary and estimated. ² USDA forecast.³ All area figures are in thousand hectares. ⁴ All yields are in thousand tons per hectare.⁵ Other oilseeds include mustardseed, flaxseed, and castor.

Table 30 --Supply and use of major oilseeds, Kazakhstan

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ¹	1996/97 ²
Cottonseed										
	<i>1,000 tons</i>									
Cottonseed area ³	127	129	119	120	117	110	110	110	110	110
Cottonseed yield ⁴	1.35	1.40	1.60	1.56	1.41	1.27	1.05	1.07	1.21	0.94
Cottonseed production	172	180	190	187	165	140	115	118	133	103
Imports	25	17	45	40	20	--	--	--	--	--
Total supply	197	197	235	227	185	140	115	118	133	103
Exports	--	--	--	--	--	--	--	--	--	--
Crush	167	167	200	193	157	105	81	71	80	73
Other use	30	30	35	34	28	35	35	47	53	30
Stocks	--	--	--	--	--	--	--	--	--	--
Rapeseed										
Rapeseed area	15	59	49	35	39	72	64	85	82	78
Rapeseed yield	0.19	0.24	0.14	0.31	0.31	0.76	0.40	0.82	0.81	0.78
Rapeseed production	3	14	7	11	12	54	26	70	66	61
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	3	14	7	11	12	54	26	70	66	61
Exports	--	--	--	--	--	--	--	--	--	--
Crush	2	10	5	8	8	38	18	63	63	58
Other use	1	4	2	3	4	16	8	7	3	3
Stocks	--	--	--	--	--	--	--	--	--	--
Soybeans										
Soybean area	38	28	25	23	15	11	6	6	5	5
Soybean yield	1.18	1.46	1.32	1.43	1.12	1.09	1.00	1.00	1.00	1.00
Soybean production	45	41	33	33	16	12	6	6	5	5
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	45	41	33	33	16	12	6	6	5	5
Exports	--	--	--	--	--	--	--	--	--	--
Crush	41	37	30	30	14	9	4	4	4	4
Other use	4	4	3	3	2	3	2	2	1	1
Stocks	--	--	--	--	--	--	--	--	--	--
Sunflowerseed										
Sunseed area	104	122	131	137	190	297	270	275	345	330
Sunseed yield	1.13	1.14	0.80	1.03	0.57	0.33	0.32	0.36	0.33	0.30
Sunseed production	117	139	105	141	109	98	86	100	115	100
Imports	32	31	60	30	15	--	--	--	--	--
Total supply	149	170	165	171	124	113	101	115	130	115
Exports	--	--	--	--	--	--	--	--	--	--
Crush	127	136	132	154	93	74	60	60	69	60
Other use	22	34	33	17	16	25	26	40	46	40
Stocks	--	--	--	--	15	15	15	15	15	15
Other oilseeds⁵										
Other oilseed area	110	110	110	110	105	82	90	97	140	124
Other oilseed yield	0.86	0.86	0.86	0.86	0.86	0.87	0.61	0.62	0.36	0.38
Other oilseed prod.	95	95	95	95	90	71	55	60	50	47
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	95	95	95	95	90	71	55	60	50	47
Exports	--	--	--	--	--	--	--	--	--	--
Crush	40	40	40	40	40	40	30	30	30	30
Other use	55	55	55	55	50	31	25	30	20	17
Stocks	--	--	--	--	--	--	--	--	--	--
Total oilseeds										
Total area	394	448	434	425	466	572	540	573	682	647
Total yield	1.10	1.05	0.99	1.10	0.84	0.66	0.53	0.62	0.54	0.49
Production	432	469	430	467	392	375	288	354	369	316
Imports	57	48	105	70	35	--	--	--	--	--
Total supply	489	517	535	537	427	390	303	369	384	331
Exports	--	--	--	--	--	--	--	--	--	--
Crush	377	390	406	424	312	265	193	227	246	225
Other use	112	127	129	113	100	110	95	127	123	91
Stocks	--	--	--	--	15	15	15	15	15	15

¹ Preliminary and estimated. ² USDA forecast.³ All area figures are in thousand hectares. ⁴ All yields are in thousand tons per hectare.⁵ Other oilseeds include mustardseed, flaxseed, and castor.

Table 31 --Supply and use of major oilseeds, Moldova

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ¹	1996/97 ²
Cottonseed										
	1,000 tons									
Cottonseed area ³	--	--	--	--	--	--	--	--	--	--
Cottonseed yield ⁴	--	--	--	--	--	--	--	--	--	--
Cottonseed production	--	--	--	--	--	--	--	--	--	--
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	--	--	--	--	--	--	--	--	--	--
Exports	--	--	--	--	--	--	--	--	--	--
Crush	--	--	--	--	--	--	--	--	--	--
Other use	--	--	--	--	--	--	--	--	--	--
Stocks	--	--	--	--	--	--	--	--	--	--
Rapeseed										
Rapeseed area	--	--	--	--	--	--	--	--	--	--
Rapeseed yield	--	--	--	--	--	--	--	--	--	--
Rapeseed production	--	--	--	--	--	--	--	--	--	--
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	--	--	--	--	--	--	--	--	--	--
Exports	--	--	--	--	--	--	--	--	--	--
Crush	--	--	--	--	--	--	--	--	--	--
Other use	--	--	--	--	--	--	--	--	--	--
Stocks	--	--	--	--	--	--	--	--	--	--
Soybeans										
Soybean area	32	39	37	27	20	25	25	25	25	25
Soybean yield	1.16	1.36	1.38	0.89	1.00	1.40	1.20	1.00	1.20	1.2
Soybean production	37	53	51	24	20	35	30	25	30	30
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	37	53	51	24	20	35	30	25	30	30
Exports	--	--	--	--	--	--	--	--	--	--
Crush	31	45	43	20	17	30	26	21	25	25
Other use	6	8	8	4	3	5	4	4	5	5
Stocks	--	--	--	--	--	--	--	--	--	--
Sunflowerseed										
Sunseed area	126	127	129	134	127	131	125	119	160	160
Sunseed yield	1.66	2.12	2.18	1.88	1.34	1.50	1.38	1.11	1.27	1.25
Sunseed production	209	270	282	252	169	197	174	133	203	200
Imports	90	30	35	65	20	--	--	--	--	--
Total supply	299	300	317	317	189	197	174	133	203	248
Exports	--	--	--	--	--	80	105	75	100	120
Crush	275	275	292	292	174	98	60	41	50	75
Other use	24	25	25	25	15	19	9	17	5	5
Stocks	--	--	--	--	--	--	--	--	48	48
Total oilseeds										
Total area	158	166	166	161	147	156	150	144	185	185
Total yield	1.56	1.95	2.01	1.71	1.29	1.49	1.36	1.10	1.26	1.24
Production	246	323	333	276	189	232	204	158	233	230
Imports	90	30	35	65	20	--	--	--	--	--
Total supply	336	353	368	341	209	232	204	158	233	278
Exports	--	--	--	--	--	80	105	75	100	120
Crush	306	320	335	312	191	128	86	62	75	100
Other use	30	33	33	29	18	24	13	21	10	10
Stocks	--	--	--	--	--	--	--	--	48	48

¹ Preliminary and estimated. ² USDA forecast.³ All area figures are in thousand hectares. ⁴ All yields are in thousand tons per hectare.⁵ Other oilseeds include mustardseed, flaxseed, and castor.

Table 32 --Supply and use of major oilseed meals, Russia

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ¹	1996/97 ²
Cottonseed meal 1,000 tons										
Extraction rate	--	--	--	--	--	--	--	--	--	--
Production	--	--	--	--	--	--	--	--	--	--
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	--	--	--	--	--	--	--	--	--	--
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	--	--	--	--	--	--	--	--	--	--
Stocks	--	--	--	--	--	--	--	--	--	--
Rapeseed meal										
Extraction rate	0.54	0.54	0.54	0.54	0.56	0.51	0.54	0.54	0.56	0.56
Production	73	73	73	74	75	46	30	32	31	22
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	73	73	73	74	75	46	30	32	31	22
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	73	73	73	74	75	46	30	32	31	22
Stocks	--	--	--	--	--	--	--	--	--	--
Soybean meal										
Extraction rate	0.81	0.81	0.80	0.77	0.80	0.80	0.80	0.78	0.78	0.78
Production	330	360	370	340	365	340	340	250	195	265
Imports	1,770	2,455	1,500	1,815	1,700	1,095	200	205	34	60
Total supply	2,100	2,815	1,870	2,155	2,065	1,435	540	455	229	325
Exports	--	--	--	--	--	--	--	5	--	--
Consumption	2,100	2,815	1,870	2,155	2,065	1,435	540	450	229	325
Stocks	--	--	--	--	--	--	--	--	0	0
Sunflowerseed meal										
Extraction rate	0.41	0.41	0.38	0.38	0.41	0.44	0.38	0.38	0.38	0.38
Production	885	935	925	895	870	986	685	618	855	710
Imports	--	--	--	--	180	120	80	40	14	10
Total supply	885	935	925	895	1,050	1,106	765	658	904	801
Exports	--	--	--	--	--	--	--	13	2	15
Consumption	885	935	925	895	1,050	1,106	765	610	820	767
Stocks	--	--	--	--	--	--	--	35	82	19
Other oilseed meals³										
Extraction rate	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Production	52	52	52	86	18	13	12	16	8	20
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	52	52	52	86	18	13	12	16	8	20
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	52	52	52	86	18	13	12	16	8	20
Stocks	--	--	--	--	--	--	--	--	--	--
Total oilseed meals										
Extraction rate	0.47	0.48	0.45	0.44	0.48	0.50	0.46	0.45	0.42	0.44
Production	1,340	1,421	1,420	1,396	1,329	1,384	1,067	915	1,089	1,017
Imports	1,770	2,455	1,500	1,815	1,880	1,215	280	245	48	70
Total supply	3,110	3,876	2,920	3,211	3,209	2,599	1,347	1,160	1,171	1,169
Exports	--	--	--	--	--	--	--	18	2	15
Consumption	3,110	3,876	2,920	3,211	3,209	2,600	1,347	1,108	1,088	1,135
Stocks	--	--	--	--	--	--	--	35	82	19

¹ Preliminary and estimated. ² USDA forecast.³ Other oilseed meals include mustardseed, flaxseed, and castor.

Table 33 --Supply and use of major oilseed meals, Ukraine

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ¹	1996/97 ²
Cottonseed meal										
	1,000 tons									
Extraction rate	--	--	--	--	--	--	--	--	--	--
Production	--	--	--	--	--	--	--	--	--	--
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	--	--	--	--	--	--	--	--	--	--
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	--	--	--	--	--	--	--	--	--	--
Stocks	--	--	--	--	--	--	--	--	--	--
Rapeseed meal										
Extraction rate	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.00	0.00	0.00
Production	23	36	36	40	37	32	32	6	6	4
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	23	36	36	40	37	32	32	6	6	4
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	23	36	36	40	37	32	32	6	6	4
Stocks	--	--	--	--	--	--	--	--	--	--
Soybean meal										
Extraction rate	0.79	0.79	0.78	0.78	0.78	0.78	0.78	0.74	0.76	0.79
Production	200	195	205	185	210	90	59	30	30	28
Imports	750	1,055	645	780	900	300	253	225	250	100
Total supply	950	1,253	854	968	1,114	394	317	259	284	132
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	947	1,249	850	965	1,110	390	313	255	280	128
Stocks	3	4	4	3	4	5	4	4	4	4
Sunflowerseed meal										
Extraction rate	0.41	0.41	0.40	0.40	0.41	0.41	0.43	0.40	0.36	0.38
Production	1,000	1,025	1,040	980	840	760	787	560	875	779
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	1,000	1,025	1,040	980	840	760	787	560	875	779
Exports	--	--	--	--	--	--	--	--	--	10
Consumption	1,000	1,025	1,040	980	840	760	787	560	875	769
Stocks	--	--	--	--	--	--	--	--	--	--
Other oilseed meals³										
Extraction rate	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Production	19	20	22	20	9	6	3	2	2	2
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	19	20	22	20	9	6	3	2	2	2
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	19	20	23	20	9	6	3	2	2	2
Stocks	--	--	--	--	--	--	--	--	--	--
Total oilseed meals										
Extraction rate	0.45	0.45	0.44	0.44	0.44	0.43	0.42	0.41	0.41	0.41
Production	1,242	1,283	1,277	1,194	1,057	900	717	566	776	558
Imports	750	1,055	645	780	900	300	253	225	250	250
Total supply	1,992	2,341	1,926	1,977	1,960	1,205	984	800	1,029	810
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	1,989	2,336	1,923	1,974	1,956	1,190	975	797	1,026	808
Stocks	3	4	3	3	4	15	9	2	2	2

¹ Preliminary and estimated. ² USDA forecast.³ Other oilseed meals include mustardseed, flaxseed, and castor.

Table 34 --Supply and use of major oilseed meals, Kazakhstan

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ¹	1996/97 ²
<i>1,000 tons</i>										
Cottonseed meal										
Extraction rate	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Production	70	70	84	81	66	44	34	30	34	31
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	70	70	84	81	66	44	34	30	34	31
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	70	70	84	81	66	44	34	30	34	31
Stocks	--	--	--	--	--	--	--	--	--	--
Rapeseed meal										
Extraction rate	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Production	1	5	3	4	5	20	10	34	34	31
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	1	5	3	4	5	20	10	34	34	31
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	1	5	3	4	5	20	10	34	34	31
Stocks	--	--	--	--	--	--	--	--	--	--
Soybean meal										
Extraction rate	0.81	0.81	0.80	0.77	0.80	0.80	0.80	0.78	0.78	0.77
Production	33	30	24	23	11	7	3	3	3	3
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	33	30	24	23	11	6	3	3	3	3
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	33	30	24	23	11	7	3	3	3	3
Stocks	--	--	--	--	--	--	--	--	--	--
Sunflowerseed meal										
Extraction rate	0.41	0.41	0.38	0.38	0.41	0.44	0.38	0.38	0.38	0.38
Production	52	56	50	58	38	32	23	23	26	23
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	52	56	50	59	38	32	23	23	26	23
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	52	56	50	59	38	33	23	23	26	23
Stocks	--	--	--	--	--	--	--	--	--	--
Other oilseed meals³										
Extraction rate	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Production	16	16	16	16	16	16	12	12	12	12
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	16	16	16	16	16	16	12	12	12	12
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	16	17	16	17	16	16	12	12	12	12
Stocks	--	--	--	--	--	--	--	--	--	--
Total oilseed meals										
Extraction rate	0.46	0.45	0.43	0.43	0.43	0.45	0.42	0.42	0.41	0.42
Production	172	177	176	183	135	120	82	101	109	100
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	173	178	176	183	137	119	82	100	109	100
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	172	178	176	184	136	119	82	101	109	101
Stocks	--	--	--	--	--	--	--	--	--	--

¹ Preliminary and estimated. ² USDA forecast.³ Other oilseed meals include mustardseed, flaxseed, and castor.

Table 35 --Supply and use of major oilseed meals, Moldova

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ¹	1996/97 ²
Cottonseed meal										
	1,000 tons									
Extraction rate	--	--	--	--	--	--	--	--	--	--
Production	--	--	--	--	--	--	--	--	--	--
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	--	--	--	--	--	--	--	--	--	--
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	--	--	--	--	--	--	--	--	--	--
Stocks	--	--	--	--	--	--	--	--	--	--
Rapeseed meal										
Extraction rate	--	--	--	--	--	--	--	--	--	--
Production	--	--	--	--	--	--	--	--	--	--
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	--	--	--	--	--	--	--	--	--	--
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	--	--	--	--	--	--	--	--	--	--
Stocks	--	--	--	--	--	--	--	--	--	--
Soybean meal										
Extraction rate	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Production	24	35	34	16	13	24	21	17	20	20
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	24	35	34	16	13	24	21	17	20	20
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	24	35	34	16	13	24	21	17	20	20
Stocks	--	--	--	--	--	--	--	--	--	--
Sunflowerseed meal										
Extraction rate	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.34	0.35
Production	96	96	102	102	61	34	21	14	17	26
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	96	96	102	102	61	34	21	14	17	26
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	96	96	102	102	61	34	21	14	17	26
Stocks	--	--	--	--	--	--	--	--	--	--
Total oilseed meals										
Extraction rate	0.39	0.41	0.41	0.38	0.39	0.45	0.48	0.50	0.49	0.46
Production	121	132	136	118	74	58	42	31	37	46
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	121	132	136	118	74	58	42	31	37	46
Exports	--	--	--	--	--	--	--	--	--	--
Consumption	121	132	136	118	74	58	42	31	37	46
Stocks	--	--	--	--	--	--	--	--	--	--

¹ Preliminary and estimated. ² USDA forecast.

³ Other oilseed meals include mustardseed, flaxseed, and castor.

Table 36 --Supply and use of major vegetable oils, Russia

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ₁	1996/97 ₂
Cottonseed oil										
	1,000 tons									
Extraction rate	--	--	--	--	--	--	--	--	--	--
Production	--	--	--	--	--	--	--	--	--	--
Imports	38	34	32	104	43	127	108	120	100	95
Intra-FSU	--	--	--	104	43	127	108	120	100	95
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Total supply	38	34	32	104	43	127	108	120	100	95
Exports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	38	34	32	104	43	127	108	120	100	95
Stocks	--	--	--	--	--	--	--	--	--	--
Rapeseed oil										
Extraction rate	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.37	0.37	0.37
Production	49	49	49	49	49	32	20	22	20	15
Imports	--	--	--	--	10	40	36	10	25	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	10	40	36	10	25	0
Total supply	49	49	49	49	59	72	56	32	45	15
Exports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	49	49	49	50	59	73	56	31	45	15
Stocks	--	--	--	--	--	--	--	--	--	--
Soybean oil										
Extraction rate	0.17	0.17	0.16	0.17	0.17	0.14	0.14	0.13	0.12	0.15
Production	70	75	75	75	75	58	58	40	30	52
Imports	40	35	35	35	40	34	40	24	23	25
Intra-FSU	na	na	na	0	0	0	0	0	0	0
Extra-FSU	na	na	na	35	40	34	40	24	23	25
Total supply	110	110	110	110	116	96	104	68	61	77
Exports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	na	na	na	--	--	--	--	--	--	--
Extra-FSU	na	na	na	--	--	--	--	--	--	--
Use	110	110	111	110	112	91	100	60	60	70
Stocks	--	--	--	1	4	5	4	8	1	7
Sunflowerseed oil										
Extraction rate	0.42	0.42	0.42	0.42	0.42	0.40	0.40	0.40	0.40	0.41
Production	903	953	1,023	987	900	894	720	650	900	770
Imports	450	405	365	220	178	105	146	205	270	100
Intra-FSU	na	na	na	120	50	40	50	75	50	50
Extra-FSU	na	na	na	100	128	65	96	130	220	50
Total supply	1,353	1,409	1,422	1,255	1,161	1,010	896	881	1,200	1,040
Exports	60	105	115	105	--	10	40	21	25	20
Intra-FSU	na	na	na	65	--	10	40	21	25	20
Extra-FSU	na	na	na	35	--	--	--	--	--	--
Use	1,242	1,270	1,259	1,067	1,150	970	830	830	1,005	970
Stocks	51	34	48	83	11	30	26	30	170	50
Other vegetable oil³										
Extraction rate	0.25	0.25	0.25	0.24	0.25	0.25	0.25	0.25	0.25	0.25
Production	33	33	33	51	12	8	8	10	5	13
Imports	32	34	35	35	26	18	20	42	35	40
Total supply	65	67	68	86	38	26	28	52	40	53
Exports	--	--	--	--	--	--	--	--	--	--
Use	65	67	68	86	38	26	28	52	40	53
Stocks	--	--	--	--	--	--	--	--	--	--
Total vegetable oil										
Extraction rate	0.37	0.37	0.37	0.37	0.38	0.36	0.35	0.35	0.37	0.38
Production	1,054	1,109	1,179	1,162	1,035	993	806	722	955	849
Imports	560	508	467	394	297	324	350	401	453	260
Intra-FSU	na	na	na	224	93	167	158	195	150	145
Extra-FSU	na	na	na	170	204	157	192	206	303	115
Total supply	1,614	1,669	1,681	1,605	1,416	1,332	1,191	1,153	1,448	1,281
Exports	60	105	115	105	--	10	40	21	25	20
Intra-FSU	na	na	na	65	--	10	40	21	25	20
Extra-FSU	na	na	na	35	--	--	--	--	--	--
Use	1,503	1,529	1,518	1,416	1,401	1,287	1,122	1,093	1,250	1,203
Stocks	51	35	49	84	15	35	30	39	173	59

¹ Preliminary and estimated. ² USDA forecast.³ Other oilseeds include mustardseed, flaxseed, and castor.

Table 37 --Supply and use of major vegetable oils, Ukraine

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ¹	1996/97 ²
Cottonseed oil										
	1,000 tons									
Extraction rate	--	--	--	--	--	--	--	--	--	--
Production	--	--	--	--	--	--	--	--	--	--
Imports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Total supply	--	--	--	--	--	--	--	--	--	--
Exports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	--	--	--	--	--	--	--	--	--	--
Stocks	--	--	--	--	--	--	--	--	--	--
Rapeseed oil										
Extraction rate	0.36	0.35	0.35	0.36	0.36	0.36	0.36	0.40	0.40	0.40
Production	15	23	23	26	24	21	21	4	4	3
Imports	--	--	--	--	10	40	36	10	25	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	10	40	36	10	25	--
Total supply	15	23	23	26	34	61	57	14	29	3
Exports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	15	23	23	26	34	61	57	14	29	3
Stocks	--	--	--	--	--	--	--	--	--	--
Soybean oil										
Extraction rate	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Production	43	42	45	40	46	20	13	7	7	6
Imports	40	35	35	35	40	34	40	23	25	38
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	35	40	34	40	23	25	38
Total supply	83	77	80	75	86	54	53	30	32	44
Exports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	83	77	80	75	86	54	53	30	32	44
Stocks	--	--	--	--	--	--	--	--	--	--
Sunflowerseed oil										
Extraction rate	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Production	1,027	1,050	1,092	1,029	861	777	767	588	1,008	861
Imports	450	405	365	220	20	2	0	5	0	0
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	2	0	5	0	0
Total supply	1,477	1,630	1,712	1,587	1,296	1,083	973	789	1,115	977
Exports	60	105	115	105	150	120	100	150	250	125
Intra-FSU	--	--	--	95	140	125	95	140	240	115
Extra-FSU	--	--	--	5	10	5	5	10	10	10
Use	1,242	1,270	1,259	1,067	842	757	677	532	749	710
Stocks	175	255	338	415	304	206	196	107	116	143
Other vegetable oil ³										
Extraction rate	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Production	12	12	14	13	6	4	2	1	1	1
Imports	32	34	35	35	26	18	20	42	35	40
Total supply	44	46	49	48	32	22	22	43	36	41
Exports	--	--	--	--	--	--	--	--	--	--
Use	44	46	49	48	32	22	22	43	36	41
Stocks	--	--	--	--	--	--	--	--	--	--
Total vegetable oil										
Extraction rate	0.39	0.40	0.40	0.40	0.40	0.41	0.41	0.41	0.41	0.41
Production	1,097	1,148	1,154	1,097	953	857	703	576	788	560
Imports	136	144	145	107	74	53	62	66	61	71
Intra-FSU	--	--	--	0	0	0	0	0	0	0
Extra-FSU	--	--	--	107	74	53	62	66	61	71
Total supply	1,301	1,404	1,443	1,373	1,215	1,084	1,016	895	980	801
Exports	397	430	433	373	286	136	146	150	190	125
Intra-FSU	--	--	--	315	185	125	140	140	180	115
Extra-FSU	--	--	--	57	101	11	6	15	20	10
Use	792	830	842	811	755	697	617	614	621	620
Stocks	112	144	168	188	174	251	253	132	169	55

¹ Preliminary and estimated. ² USDA forecast.³ Other oilseeds include mustardseed, flaxseed, and castor.

Table 38 --Supply and use of major vegetable oils, Kazakhstan

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ₁	1996/97 ₂
Cottonseed oil										
	1,000 tons									
Extraction rate	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Production	27	27	32	31	25	17	13	11	13	12
Imports	50	50	45	24	32	32	40	30	30	30
Intra-FSU	--	--	--	24	32	32	40	30	30	30
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Total supply	77	77	77	55	57	49	53	41	43	42
Exports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	77	77	77	55	58	49	53	42	43	42
Stocks	--	--	--	--	--	--	--	--	--	--
Rapeseed oil										
Extraction rate	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.37	0.37	0.37
Production	1	4	2	3	3	14	7	23	23	21
Imports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Total supply	1	4	2	3	3	14	7	23	23	21
Exports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	1	4	2	3	3	14	7	6	3	3
Stocks	--	--	--	--	--	--	--	--	--	--
Soybean oil										
Extraction rate	0.17	0.17	0.16	0.17	0.17	0.14	0.14	0.13	0.13	0.14
Production	7	6	5	5	2	1	1	0	1	1
Imports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Total supply	7	6	5	5	2	1	1	0	1	1
Exports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	7	7	5	6	2	2	1	1	1	1
Stocks	--	--	--	--	--	--	--	--	--	--
Sunflowerseed oil										
Extraction rate	0.42	0.42	0.42	0.42	0.42	0.40	0.40	0.40	0.40	0.40
Production	51	54	53	62	37	29	24	24	28	24
Imports	35	45	40	34	38	34	25	25	25	25
Intra-FSU	--	--	--	26	25	25	25	25	25	25
Extra-FSU	--	--	--	8	13	9	0	0	0	0
Total supply	86	99	93	96	75	64	49	49	53	49
Exports	--	--	--	--	2	1	--	--	--	--
Intra-FSU	--	--	--	--	2	1	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	86	100	93	96	73	63	49	49	53	49
Stocks	--	--	--	--	1	--	--	--	--	--
Other vegetable oil³										
Extraction rate	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Production	16	16	16	16	16	16	12	12	12	12
Imports	--	--	--	--	--	--	--	--	--	--
Total supply	16	16	16	16	16	16	12	12	12	12
Exports	--	--	--	--	--	--	--	--	--	--
Use	16	16	16	16	16	16	12	12	12	12
Stocks	--	--	--	--	--	--	--	--	--	--
Total vegetable oil										
Extraction rate	0.27	0.27	0.26	0.27	0.27	0.29	0.29	0.31	0.31	0.31
Production	101	107	107	116	84	77	56	71	76	70
Imports	85	95	85	58	70	66	65	55	55	55
Intra-FSU	--	--	--	50	57	57	65	55	55	55
Extra-FSU	--	--	--	8	13	9	0	0	0	0
Total supply	186	202	219	143	128	126	138	126	131	158
Exports	--	--	--	--	2	1	--	--	--	--
Intra-FSU	--	--	--	--	2	1	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	185	175	192	143	126	125	108	109	98	106
Stocks	--	27	--	31	26	17	--	--	34	--

¹ Preliminary and estimated. ² USDA forecast.³ Other oilseeds include mustardseed, flaxseed, and castor.

Table 39 --Supply and use of major vegetable oils, Moldova

	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96 ¹	1996/97 ²
Cottonseed oil										
	<i>1,000 tons</i>									
Extraction rate	--	--	--	--	--	--	--	--	--	--
Production	--	--	--	--	--	--	--	--	--	--
Imports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Total supply	--	--	--	--	--	--	--	--	--	--
Exports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	--	--	--	--	--	--	--	--	--	--
Stocks	--	--	--	--	--	--	--	--	--	--
Rapeseed oil										
Extraction rate	--	--	--	--	--	--	--	--	--	--
Production	--	--	--	--	--	--	--	--	--	--
Imports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Total supply	--	--	--	--	--	--	--	--	--	--
Exports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	--	--	--	--	--	--	--	--	--	--
Stocks	--	--	--	--	--	--	--	--	--	--
Soybean oil										
Extraction rate	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Production	5	7	7	3	3	5	4	3	4	4
Imports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Total supply	5	7	7	3	3	5	4	3	4	4
Exports	--	--	--	--	--	--	--	--	--	--
Intra-FSU	--	--	--	--	--	--	--	--	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	5	7	7	3	3	5	4	3	4	4
Stocks	--	--	--	--	--	--	--	--	--	--
Sunflowerseed oil										
Extraction rate	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.39	0.39	0.39
Production	110	110	117	117	70	39	24	16	20	30
Imports	--	--	--	--	--	--	6	16	18	18
Intra-FSU	--	--	--	--	--	--	6	16	18	18
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Total supply	110	110	117	117	70	39	30	32	38	48
Exports	55	58	60	59	25	9	--	5	--	--
Intra-FSU	--	--	--	59	25	9	--	5	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	55	52	57	58	45	30	30	27	38	38
Stocks	--	--	--	--	--	--	--	--	--	--
Total vegetable oil										
Extraction rate	0.42	0.43	0.42	0.41	0.42	0.45	0.47	0.47	0.47	0.45
Production	115	117	124	120	72	44	28	19	24	34
Imports	--	--	--	--	--	--	6	16	18	18
Intra-FSU	--	--	--	--	--	--	6	16	18	18
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Total supply	115	117	124	120	72	44	34	35	42	52
Exports	55	58	60	59	25	9	--	5	--	--
Intra-FSU	--	--	--	59	25	9	--	5	--	--
Extra-FSU	--	--	--	--	--	--	--	--	--	--
Use	60	59	63	61	47	35	34	30	42	42
Stocks	--	--	--	--	--	--	--	--	--	--

¹ Preliminary and estimated. ² USDA forecast.

³ Other oilseeds include mustardseed, flaxseed, and castor.

Table 40 --Area, yield and production of
sunflowerseed, selected NIS countries

Country	1993	1994	1995	1996
<i>Area, 1,000 hectares</i>				
Kazakstan	270	275	285	300
Moldova	125	119	160	160
Russia	2,920	3,113	4,100	4,000
Ukraine	1,637	1,784	2,000	1,900
<i>Yield, tons per hectare</i>				
Kazakstan	0.32	0.36	0.40	0.33
Moldova	1.39	1.12	1.27	1.25
Russia	0.95	0.82	1.02	0.70
Ukraine	1.36	0.88	1.43	1.11
<i>Production, 1,000 tons</i>				
Kazakstan	86	100	115	100
Moldova	174	133	203	200
Russia	2,765	2,553	4,194	2,758
Ukraine	2,226	1,570	2,857	2,123

Source: SNG Statkom, and USDA.

Table 41 --Potato and vegetable production, NIS countries

Country	Potatoes				Vegetables			
	1993	1994	1995	1996	1993	1994	1995	1996
---1,000 tons---								
Azerbaijan	152	150	200	209	488	471	500	586
Armenia	414	400	429	423	417	424	451	428
Belarus	11,644	8,241	9,474	10,677	1,047	1,029	1,066	1,176
Georgia	249	297	353	360	386	442	428	395
Kazakstan	2,296	1,953	1,720	1,656	808	794	780	776
Kyrgyzstan	308	288	431	562	259	260	317	369
Moldova	726	433	401	331	777	461	605	319
Russia	37,650	33,828	39,737	38,529	9,827	9,621	11,151	10,716
Tajikistan	147	140	110	112	485	480	480	491
Turkmenistan	32	30	21	na	286	340	376	na
Uzbekistan	473	562	440	490	3,039	2,918	2,785	2,481
Ukraine	21,009	16,102	14,648	18,400	6,547	5,142	5,854	5,011

na=not available.

Source: SNG, 1996. Interfax, 1997.

Table 42 -- Sugar balances, NIS/B countries (raw value).

Country	Year	Area 1,000 hectares	Yield Tons/ha.	Sugarbeet output	State purchase	Beginning stocks	Sugar prod. from beets	Imports of refined sugar (intra-FSU)	Imports of refined sugar (extra-FSU)	Imports of raw sugar (extra-FSU)	Total sugar imports	Domestic sugar supply	Exports of sugar (intra-FSU)	Exports of sugar (extra-FSU)	Total sugar exports	Estim. consump- tion	Ending stocks	Popul. Million	Per capita consum- ption Kg.
Russia	1994/95	1,104	12.6	13,946	9,000	1,520	1,655	740	879	1,081	2,700	5,875	30	70	100	4,900	875	148.4	33.0
	1995/96	1,085	17.6	19,107	17,600	875	2,060	828	1,100	1,272	3,200	6,135	20	80	100	5,000	1,035	148.3	33.7
	1996/97	1,013	16.3	16,500	14,000	1,035	1,750	900	1,750	1,650	3,300	6,085	45	55	100	5,100	885	148.1	34.4
	1997/98	980	17.3	17,000	14,000	885	1,800	875	425	1,700	3,000	5,685	20	30	50	5,000	635	148.1	33.8
Ukraine	1994/95	1,485	18.6	27,604	22,000	570	3,600	0	0	200	200	4,370	919	781	1,700	2,300	370	52.1	44.1
	1995/96	1,448	20.3	29,400	28,000	370	3,800	0	0	300	300	4,470	1,243	557	1,800	2,250	420	51.7	43.5
	1996/97	1,390	18.3	25,500	22,000	420	2,900	0	0	500	500	3,820	1,100	0	1,100	2,100	620	51.3	40.9
	1997/98	1,300	19.5	25,400	22,000	620	2,850	0	0	100	100	3,570	1,100	0	1,100	2,100	370	51.3	40.9
Belarus	1994/95	58	18.6	1,078	900	60	107	86	54	100	240	407	0	0	0	360	47	10.3	35.0
	1995/96	55	21.3	1,172	1,000	47	152	50	80	85	215	414	0	0	0	360	54	10.3	35.0
	1996/97	58	19.0	1,100	900	54	140	40	80	120	240	434	0	0	0	380	54	10.3	36.9
	1997/98	58	19.0	1,100	900	54	140	40	80	130	250	444	0	0	0	380	64	10.3	36.9
Moldova	1994/95	75	20.4	1,527	1,000	36	160	0	0	55	55	251	39	0	39	180	32	4.4	40.9
	1995/96	74	25.9	1,913	1,300	32	190	0	0	0	0	222	0	40	40	160	22	4.3	37.2
	1996/97	75	24.0	1,800	1,200	22	190	0	0	0	0	212	0	30	30	150	32	4.3	34.9
	1997/98	75	24.0	1,800	1,200	32	190	0	0	0	0	222	0	40	40	140	42	4.3	32.6
Kazakhstan	1994/95	55	7.8	428	400	109	60	24	170	188	382	551	0	0	0	510	41	17.0	30.0
	1995/96	55	6.7	371	350	41	50	90	198	112	400	491	0	0	0	450	41	16.7	26.9
	1996/97	50	12.0	600	400	41	65	50	160	190	400	506	0	0	0	460	46	16.5	27.9
	1997/98	50	12.0	600	400	46	65	50	160	190	400	511	0	0	0	460	51	16.5	27.9
Kyrgyzstan	1994/95	12	9.2	110	100	19	11	0	0	100	100	130	0	0	0	110	20	4.5	24.4
	1995/96	12	13.3	160	100	20	15	0	0	85	85	120	0	0	0	100	20	4.5	22.2
	1996/97	12	17.9	215	100	20	15	0	0	85	85	120	0	0	0	113	7	4.5	25.1
	1997/98	12	17.0	204	100	7	15	0	0	90	90	112	0	0	0	105	7	4.5	23.3
Lithuania	1994/95	31	17.7	550	450	22	50	0	10	35	45	117	0	0	0	105	12	3.8	27.6
	1995/96	32	25.9	830	700	12	80	0	0	20	20	112	0	0	0	100	12	3.7	27.0
	1996/97	32	25.0	800	700	12	70	0	0	35	35	117	0	0	0	100	17	3.7	27.0
	1997/98	32	25.0	800	700	17	70	0	0	30	30	117	0	0	0	100	17	3.7	27.0
Latvia	1994/95	20	15.0	300	270	12	30	0	20	65	85	127	0	0	0	115	12	2.7	42.6
	1995/96	20	15.0	300	270	12	35	0	30	45	75	122	0	0	0	110	12	2.5	44.0
	1996/97	20	15.0	300	270	12	35	0	30	70	100	147	0	0	0	100	47	2.5	40.0
	1997/98	20	15.0	300	270	47	35	0	30	70	100	182	0	0	0	100	82	2.5	40.0
Other NIS/B countries	1994/95	0	0	0	0	201	0	138	897	51	1,086	1,287	0	0	0	1,110	177	50.3	22.0
	1995/96	0	0	0	0	177	0	295	717	28	1,040	1,217	0	0	0	1,060	157	50.1	21.1
	1996/97	0	0	0	0	157	0	155	704	211	1,070	1,227	0	0	0	1,080	147	50.1	21.6
	1997/98	0	0	0	0	147	0	155	910	40	1,105	1,252	0	0	0	1,090	162	50.1	21.8
Total NIS/B region	1994/95	2,840	16.0	45,545	39,839	2,549	5,673	988	2,030	1,875	4,893	13,115	988	851	1,839	9,690	1,586	293.3	33.0
	1995/96	2,771	19.1	52,185	49,320	1,586	6,382	1,263	2,125	1,947	5,335	13,303	1,263	677	1,940	9,590	1,773	293.1	32.7
	1996/97	2,650	17.1	46,815	39,590	1,773	5,165	1,145	1,724	2,861	5,730	12,668	1,145	85	1,230	9,583	1,853	293.1	32.7
	1997/98	2,527	18.7	47,204	39,570	1,855	5,165	1,120	1,605	2,350	5,075	12,095	1,120	70	1,190	9,475	1,430	293.1	32.3

1. USDA: estimates as of May, 1997.

Sources: Statistik SNG 1996; Goskomstat Rossii, 1996, 1997.

Table 43--Cotton balances, NIS/B countries

Country	Year (Aug. - July)	Beginning stocks	Area hectares	Yield (Seed cotton)	Seed cotton production	Ginning rate	Lint cotton production	1,000 tons										Per capita consumption	Ending stocks	Cotton cloth production
								1,000 tons	Tons/ha	Lint imports	Lint exports	Total lint cotton imports	Total lint cotton exports	Domestic lint consumption	Population	1,000 tons	1,000 m ²			
Russia	1993/94	36	0	0	0	0	0	653	0	653	669	180	0	180	479	148.4	3.2	30	2,324	
	1994/95	30	0	0	0	0	0	470	0	470	500	58	87	145	275	148.4	1.9	80	1,700	
	1995/96	80	0	0	0	0	0	239	0	239	319	0	0	0	250	148.3	1.8	69	1,700	
	1996/97	69	0	0	0	0	0	207	0	207	276	0	0	0	229	148.2	2.0	47	1,700	
Ukraine	1993/94	13	0	0	0	0	0	44	0	44	56	0	0	0	44	52.2	0.8	13	238	
	1994/95	13	0	0	0	0	0	65	0	65	78	44	0	44	29	52.1	0.6	5	na	
	1995/96	5	0	0	0	0	0	71	0	71	76	22	11	33	27	51.7	0.5	16	na	
	1996/97	16	0	0	0	0	0	60	0	60	76	22	11	33	27	51.3	0.5	16	na	
Kazakhstan	1993/94	21	110	1.82	200	0.30	60	0	0	0	81	33	11	44	25	17.3	1.4	12	na	
	1994/95	12	110	1.88	206	0.31	64	0	0	0	76	33	11	44	20	17.0	1.1	12	na	
	1995/96	12	110	2.14	235	0.32	74	0	0	0	86	33	22	54	16	16.7	1.0	16	na	
	1996/97	16	110	2.07	228	0.31	57	0	0	0	73	27	17	44	17	16.5	1.1	12	na	
Uzbekistan	1993/94	334	1,695	2.55	4,322	0.31	1,321	1	0	1	1,656	361	902	1,263	174	21.4	8.1	219	na	
	1994/95	219	1,538	2.63	4,050	0.31	1,258	1	0	1	1,478	311	779	1,090	180	22.2	8.1	208	na	
	1995/96	208	1,500	2.65	3,980	0.31	1,250	1	0	1	1,459	196	764	980	191	22.6	8.4	289	na	
	1996/97	289	1,500	2.59	3,891	0.30	1,045	1	0	1	1,335	191	745	936	200	23.0	8.7	199	na	
Kyrgyzstan	1993/94	5	19	2.33	44	0.30	13	5	0	5	23	5	0	5	14	4.5	3.1	3	na	
	1994/95	3	26	2.08	54	0.31	17	2	0	2	23	8	0	8	11	4.5	2.4	4	na	
	1995/96	4	33	2.11	70	0.31	22	2	0	2	28	9	4	13	11	4.5	2.4	4	na	
	1996/97	4	40	2.12	85	0.31	26	0	0	0	30	9	4	13	12	4.5	2.7	5	na	
Tajikistan	1993/94	27	260	1.87	487	0.31	150	0	0	0	177	66	70	136	11	5.7	1.9	30	na	
	1994/95	30	280	1.53	429	0.31	131	0	0	0	161	62	83	145	9	5.8	1.6	7	na	
	1995/96	7	270	1.45	392	0.31	120	0	0	0	127	48	50	98	9	5.8	1.6	20	na	
	1996/97	20	235	1.51	356	0.31	89	0	0	0	109	42	45	87	10	5.9	1.7	12	na	
Turkmenistan	1993/94	89	574	2.26	1,300	0.31	403	0	0	0	492	93	276	370	21	4.3	4.9	100	na	
	1994/95	100	540	2.11	1,141	0.31	350	0	0	0	450	50	270	320	27	4.4	6.1	103	na	
	1995/96	103	450	1.80	808	0.31	250	0	0	0	354	46	150	196	33	4.5	7.3	125	na	
	1996/97	125	450	1.79	803	0.31	131	0	0	0	256	0	130	130	33	4.6	8.3	93	na	
Azerbaijan	1993/94	52	225	1.34	302	0.31	95	1	0	1	148	31	50	81	22	7.4	2.9	46	na	
	1994/95	46	213	1.38	294	0.31	91	0	0	0	137	29	58	87	22	7.5	2.9	28	na	
	1995/96	28	210	1.28	270	0.31	83	0	0	0	111	0	65	65	18	7.5	2.7	28	na	
	1996/97	28	210	1.39	292	0.30	83	0	0	0	111	18	48	66	15	7.5	2.9	30	na	
Other NIS/B countries	1993/94	14	0	0	0	0	0	66	2	68	82	0	0	0	65	32.0	2.0	17	na	
	1994/95	17	0	0	0	0	0	112	2	114	131	54	10	64	50	31.4	1.6	14	na	
	1995/96	14	0	0	0	0	0	85	11	96	110	47	0	47	50	31.5	1.8	13	na	
	1996/97	13	0	0	0	0	0	78	15	93	106	37	0	37	57	31.6	2.1	12	na	
Total NIS/B region	1993/94	591	2,883	2.31	6,655	0.31	2,042	770	2	772	3,405	770	1,309	2,079	855	293.2	3.1	470	na	
	1994/95	470	2,707	2.23	6,174	0.31	1,911	649	2	651	3,032	649	1,298	1,947	624	293.3	3.1	461	na	
	1995/96	461	2,573	2.24	5,754	0.31	1,798	400	11	411	2,670	400	1,086	1,486	605	293.1	3.1	579	na	
	1996/97	579	2,545	2.22	5,654	0.30	1,431	346	15	361	2,371	346	1,000	1,346	600	293.1	3.1	425	na	

na = not available.

USDA: estimates as of March, 1997.

Sources: Statkom SNG, 1996; Goskomstat Rossii, 1996.

Table 44 --Production of mineral fertilizers, ¹
selected NIS countries

Total mineral fertilizers		
	1,000 tons	Percent change ²
Russia		
1981-85 avg.	14,605	
1986-90 avg.	17,744	
1990	15,979	
1991	15,042	-6%
1992	12,300	-18%
1993	9,917	-19%
1994	8,266	-17%
1995	9,639	17%
1996	9,000	-7%
Ukraine		
1981-85 avg.	4,788	
1986-90 avg.	5,340	
1990	4,815	
1991	4,238	-12%
1992	3,261	-23%
1993	2,492	-24%
1994	2,337	-6%
1995	2,200	-6%
1996*	2,400	9%
Kazakstan		
1981-85 avg.	1,429	
1986-90 avg.	1,644	
1990	1,656	
1991	1,516	-8%
1992	880	-42%
1993	304	-65%
1994	126	-59%
1995	197	56%
1996*	185	-6%
Uzbekistan		
1981-85 avg.		
1986-90 avg.		
1990	1,800	
1991	1,700	-6%
1992	1,400	-18%
1993	1,300	-7%
1994	800	-38%
1995	900	13%
1996*	1,050	17%
Belarus		
1981-85 avg.	5,530	
1986-90 avg.	6,380	
1990	5,996	
1991	5,200	-13%
1992	4,000	-23%
1993	2,513	-37%
1994	2,981	19%
1995	3,349	12%
1996*	3,400	2%

¹ 100-percent nutrient weight-basis.

² Percent change from the previous year.

*= Estimates, based on Jan.- Nov. 1996 prod.

Sources: Statkom SNG, 1995, 1996.

Table 45 -- Availability and use of mineral fertilizers (nutrient weight 100%), Russia

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
-- 1,000 tons --												
Production	17,304	17,712	18,454	19,071	17,506	15,979	15,042	12,300	9,917	8,300	9,600	9,000
Nitrogen	8,013	8,491	8,554	8,642	7,812	7,186	6,681	5,815	4,817	4,100	4,900	4,700
Phosphate	4,437	4,769	4,937	5,069	4,973	4,943	4,275	3,015	2,500	1,700	1,900	1,500
Potash	4,852	4,449	4,959	5,358	4,719	3,848	4,086	3,470	2,600	2,500	2,800	2,200
Mixed/other	na	na	na	na	na	na	na	na	na	na	na	600
Imports	na	na	na	na	na	3,567	2,816	547	147	na	na	na
Intra-NIS/B total	na	na	na	na	na	1,978	1,479	288	77	na	na	na
Belarus	na	na	na	na	na	647	648	89	37	na	na	na
Kazakstan	na	na	na	na	na	750	568	147	24	na	na	na
Uzbekistan	na	na	na	na	na	192	121	23	9	na	na	na
Ukraine	na	na	na	na	na	120	142	29	7	na	na	na
Deliveries to agriculture	12,677	13,648	14,086	13,851	12,467	10,828	10,102	5,510	3,721	1,447	1,507	1,580
Nitrogen	5,304	5,687	5,930	5,781	4,850	4,217	3,967	2,622	2,083	998	995	na
Phosphate	4,018	4,593	4,678	4,705	4,647	4,335	3,761	1,540	907	300	400	na
Potash	3,352	3,364	3,473	3,361	2,967	2,275	2,374	1,348	731	100	100	na
Exports total	na	na	na	na	na	15,785	5,094	15,785	11,311	12,766	16,265	15,200
Extra-NIS/B total	na	na	na	na	na	13,485	3,368	14,388	10,944	12,322	16,000	15,000
Nitrogen	na	na	na	na	na	7,160	na	8,042	4,822	5,500	8,100	8,000
Phosphate	na	na	na	na	na	845	na	2,223	3,392	3,200	3,800	3,500
Potash	na	na	na	na	na	5,480	na	4,123	2,730	3,622	4,100	3,500
Intra-NIS/B total	na	na	na	na	na	2,320	1,726	1,397	367	444	265	200
Belarus	na	na	na	na	na	408	387	390	136	na	na	na
Kazakstan	na	na	na	na	na	112	55	181	16	na	na	na
Uzbekistan	na	na	na	na	na	114	173	172	7	21	na	na
Ukraine	na	na	na	na	na	151	610	292	78	na	na	na
Application rates:	<i>Kg/hectare</i>											
Sown area, all crops	96.0	103.5	106.7	105.3	95.6	88.0	80.0	44.0	46.0	24.0	17.0	17.0
of which :												
Grain, except corn	69.0	84.0	87.0	88.0	NA	81.0	na	42.0	44.0	23.0	16.0	na
Sugarbeets	na	na	na	na	na	431.0	na	285.0	247.0	150.0	120.0	na
Sunflower	na	na	na	na	na	na	na	na	27.0	9.0	9.0	na
Potatoes	295.0	309.0	na	na	na	na	na	na	176.0	119.0	113.0	na
Fertilized area, all crops	na	na	na	na	na	133.0	na	na	102.0	83.0	68.0	77.0

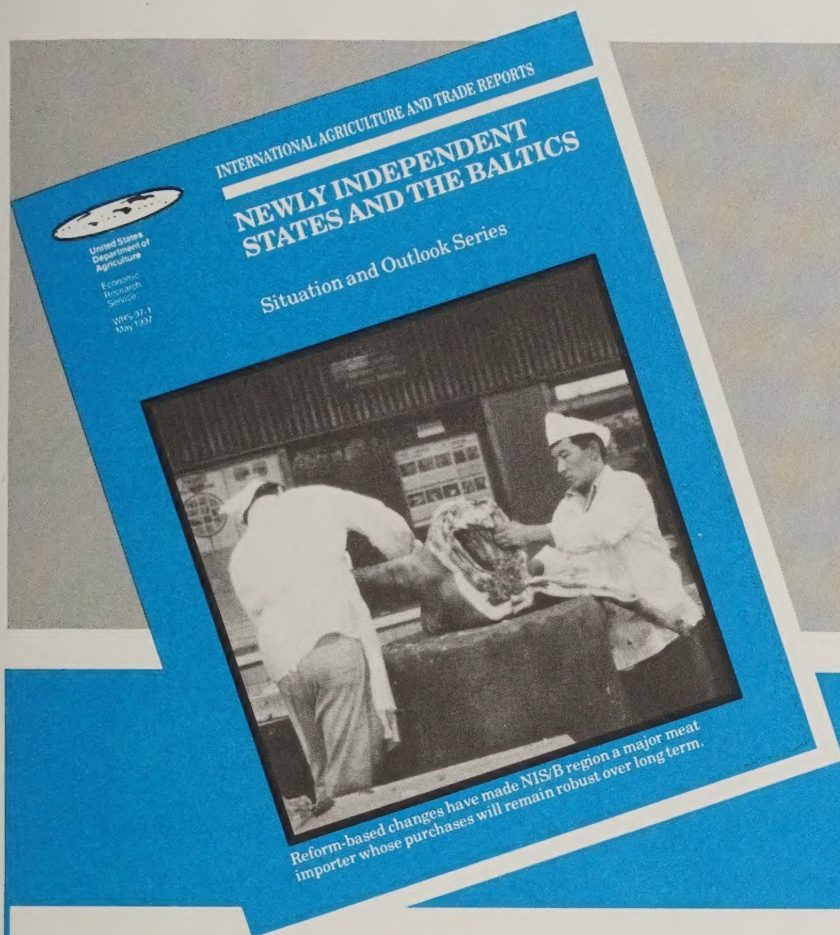
na = not available.

1 Physical weight.

Sources: "Strany-Chleny SNG", Stat. Ezhegodnik, Statkom SNG; Narkhoz: Rossii, Ukrainy, Belarus, Kazakstan; Statkom SNG, 1995, 1996; Goskomstat Rossii, 1996; Promyshlennost' Rossii; Tamochennyi Komitet Rossii, 1995, 1996; Minsel'khozprod Rossii, 1997.

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